

# City of Waltham

*Jeannette A. McCarthy*  
Mayor

CITY OF WALTHAM  
CITY CLERK'S OFFICE

2022 DEC -8 AM 11:29

December 8, 2022

RECEIVED

TO: The City Council  
RE: Cornelia Warren Farm and Field House - 240 Beaver Street

Dear Councillors:

Enclosed please find:

1. Assessor Information
2. Auditing Department Information
3. Building Department Information
4. Consolidated Public Works Department Information
5. Environmental Information
6. Fire Department Information
7. Law Department Information
8. Map provided by UMASS
9. Treasurer Department Information

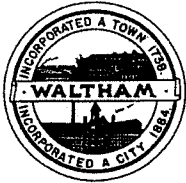
The Law Department and I are available to discuss any of the above information with you.

Sincerely yours,

Jeannette A. McCarthy  
JAM/sm  
enclosures

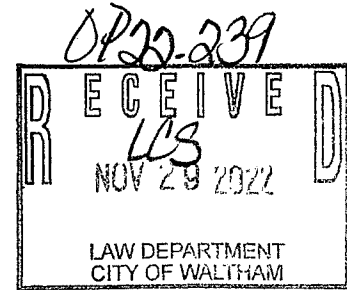
ASSESSOR INFORMATION  
REGARDING CORNELIA WARREN FARM AND FIELD HOUSE  
240 BEAVER STREET





**Assessors**  
FRANCIS P. CRAIG, CHAIR  
AMY CIASSIE  
BERNADETTE VAZQUEZ

**City of Waltham**  
MASSACHUSETTS  
**BOARD OF ASSESSORS**



**MEMORANDUM**

**TO:** Luke Stanton- Assistant City Solicitor  
**FROM:** Francis P. Craig *FPC*  
**DATE:** November 28, 2022  
**RE:** Waltham Field Station- 240 Beaver Street

—  
Luke

The Mayor asks that I send you the documents which I received from the tenants at the field station. Accordingly, please find attached:

- 1- Second Extension of license Agreement- Waltham Fields Community Farm;
- 2- Administration Building floor plan and square foot layout of rented offices;
- 3- Memorandum of Agreement and Grant of License-Tufts University;
- 4- Agreement and Conditions of Use of Office Facilities at UMass Waltham:  
Grow Native Massachusetts;
- 5- First Extension of License Agreement- Grow Native Mass.;
- 6- Agreement and Conditions for Use of Office Facilities at UMass Waltham;
  - a. Boston Area Gleaners.
  - b. Exhibit B and Insurance certificate.
- 7- Agreement and Conditions for Use of Office Facilities at UMass Waltham;
  - a. Green Rows of Waltham;
  - b. First Extension of License Agreement- Green Rows of Waltham.

Please note that I have not included copies of the charitable organizations filings pursuant to MGL c. 59, §5 clause 3(b); state tax form 3ABC. Should you require such filings, please let me know.

Thank you.

Frank

Waltham Fields

SECOND EXTENSION OF LICENSE AGREEMENT

This Second Extension of License Agreement ("Second Extension") is made on December 15, 2020 by and between the University of Massachusetts Amherst ("University") and Community Farms Outreach d/b/a Waltham Fields Community Farm ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018 and a First Extension dated April 30, 2020, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

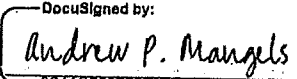
1. TERM: The term of the Agreement shall be extended on a month-to-month basis, terminable by Licensor or Licensee upon thirty (30) days' prior written notice to the other party.
2. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of One Thousand Six Hundred Sixty-two Dollars and Fifty cents (\$1,662.50) per month.
3. PREMISES: The text in Section 2 (Premises) is hereby deleted and replaced with the following text:  
  
"Use of offices 07, 08, 108A, 110, 112, 117, and 119, closets 08A and 118, hallway 112A, restroom 117A, and store room 02, all located within the main building at 240 Beaver Street, Waltham, MA, and land consisting of 8.25 acres farm land and land occupied by CSA Barn, Pesticide Storage Building, Greenhouses 6 and 7, Agricultural Storage Shed, Volunteer Shed, and Learning Garden, as shown in Exhibit A pages one through three."
4. Section 22 (Miscellaneous Provisions) Exhibit A – Licensed Land dated April 27, 2020 is hereby deleted and replaced with Exhibit A – Licensed Land dated January 13, 2021, Basement Floor Plan dated August 10, 2011, and First Floor Plan dated August 10, 2011.
5. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Second Extension as of the date first written above.

**UNIVERSITY:**

UNIVERSITY OF MASSACHSETTS

By:   
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

**LICENSEE:**

COMMUNITY FARMS OUTREACH

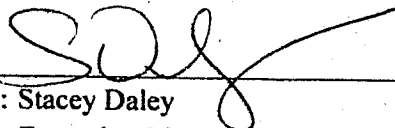
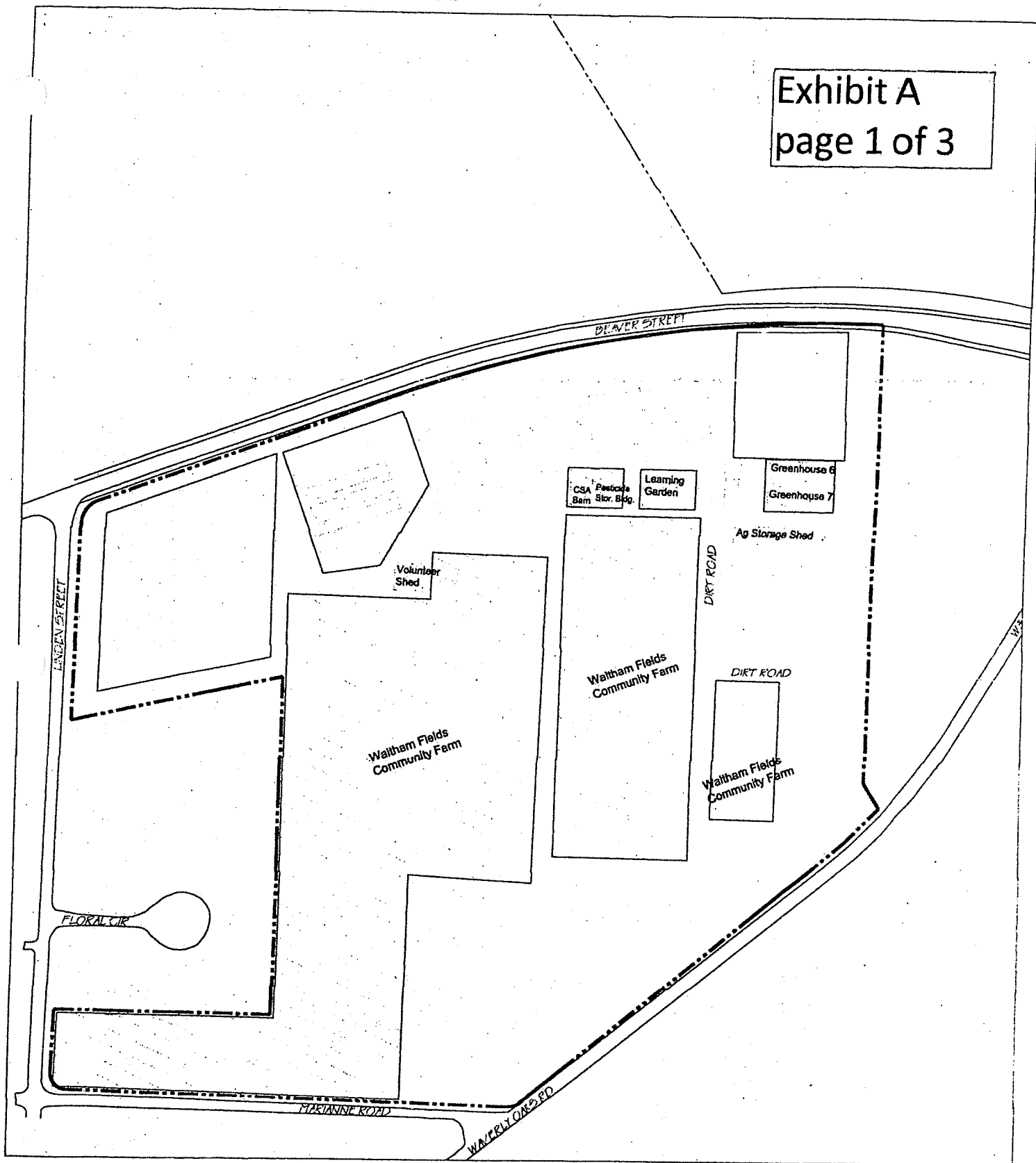
By:   
Name: Stacey Daley  
Title: Executive Director

Exhibit A  
page 1 of 3



7 Licensed Land

SCALE: 1"=200'  
0 50 100 200

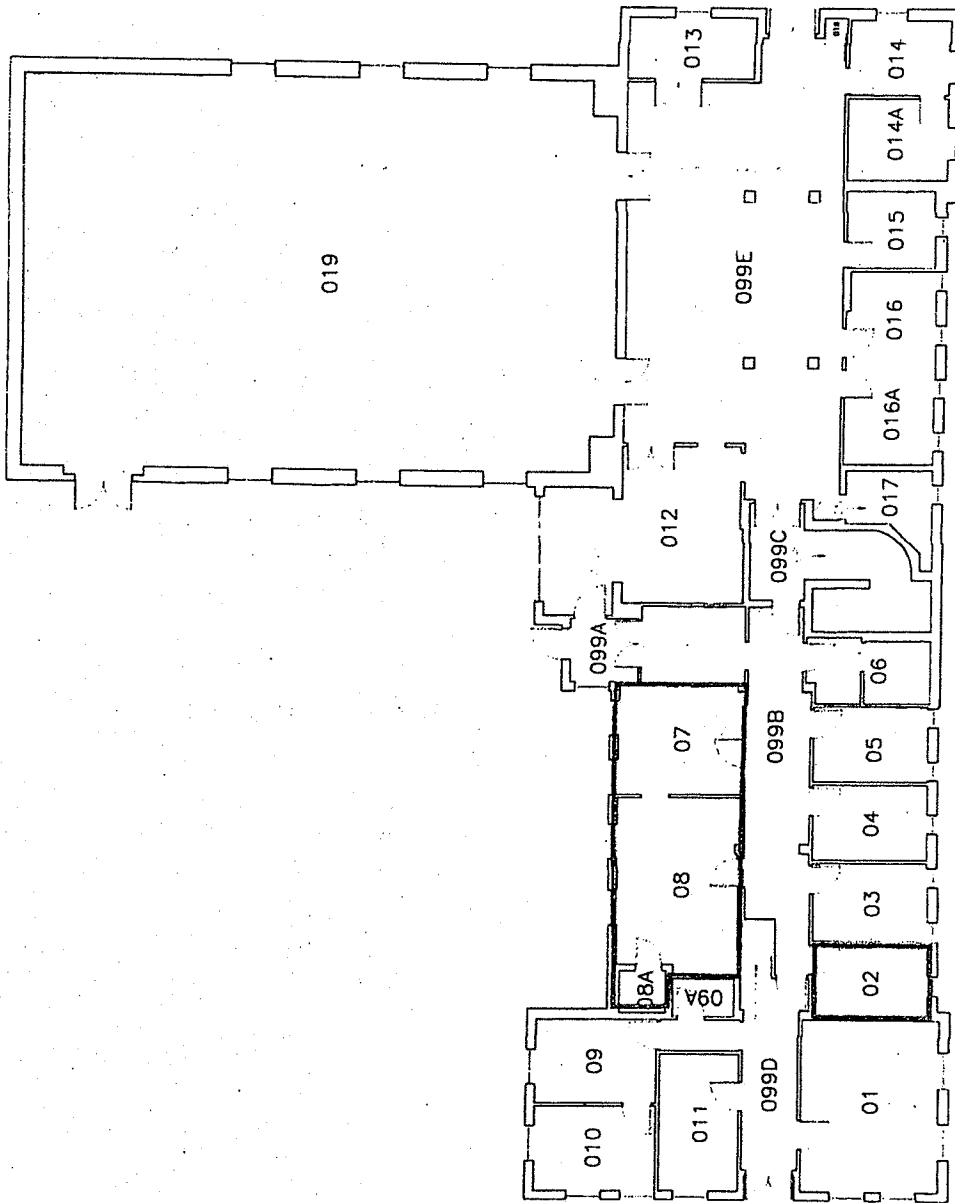
WALTHAM STATION  
COMMUNITY FARMS OUTREACH  
EXHIBIT A - LICENSED LAND

1/13/2021

UMass Campus Planning



Exhibit A  
page 2 of 3



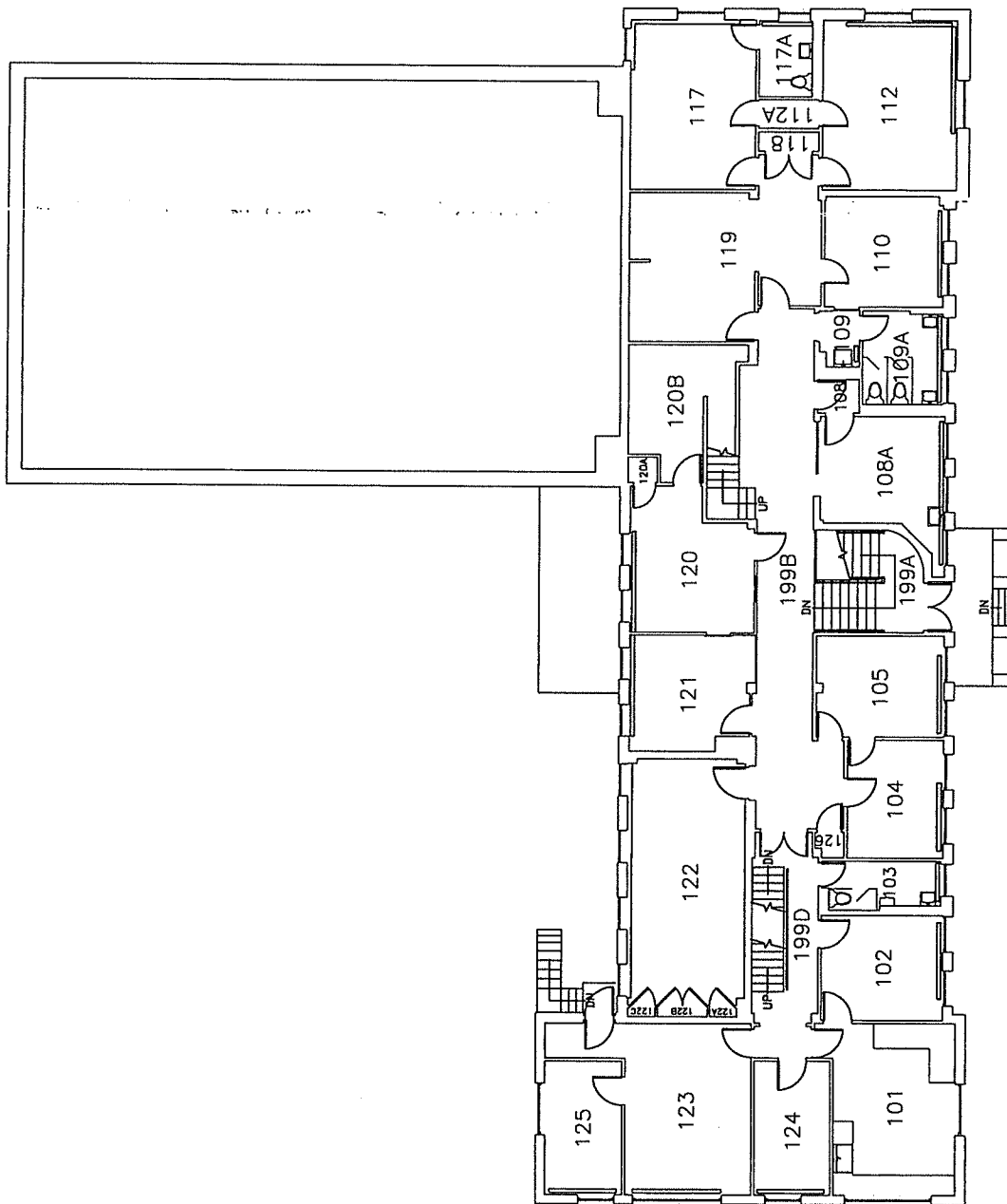
**ADMINISTRATION BUILDING  
BASEMENT FLOOR PLAN**  
Facilities Planning  
University of Massachusetts Amherst

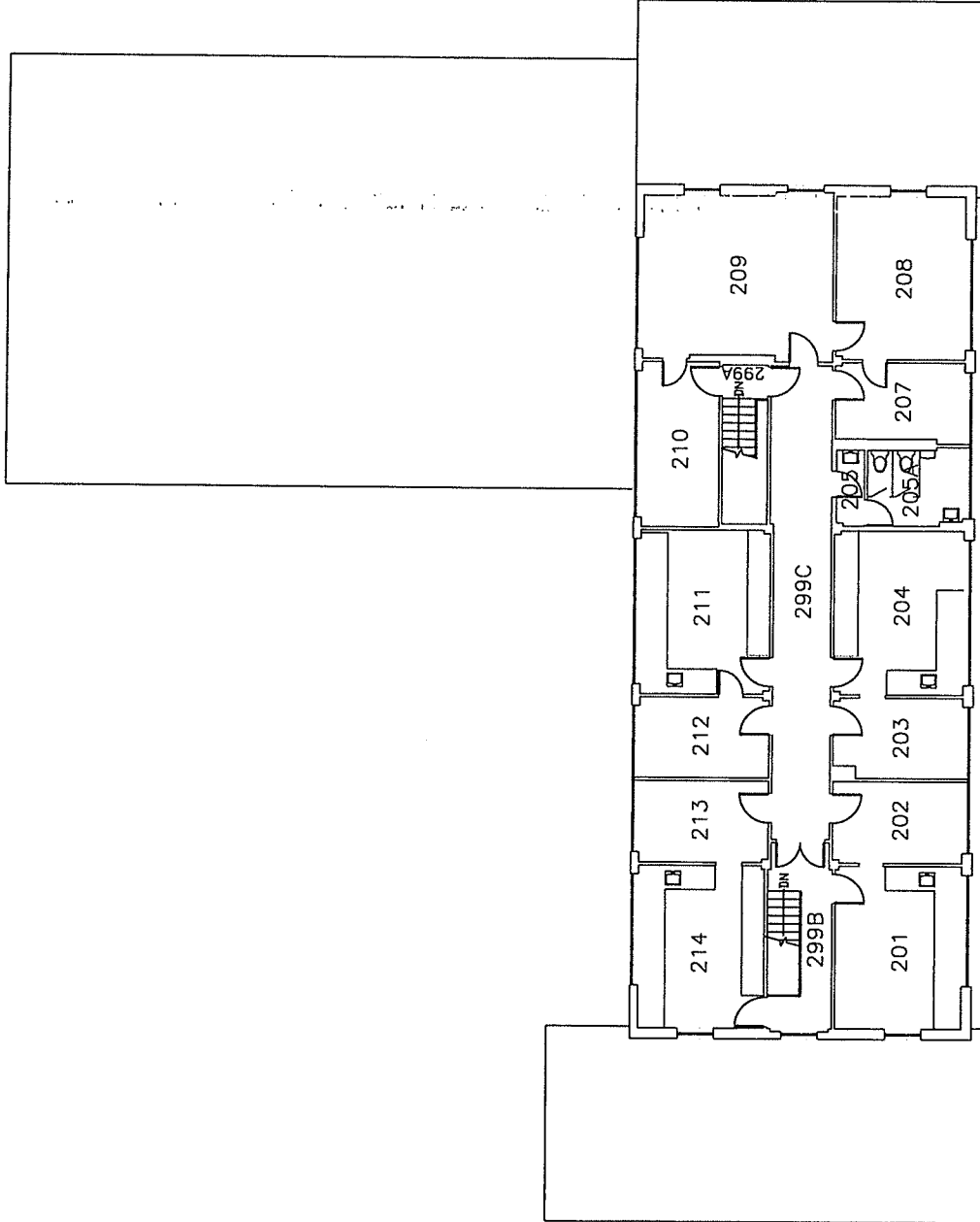
Issue Date: 08/10/2011  
Revision Date:  
Building No: 229

229-BT

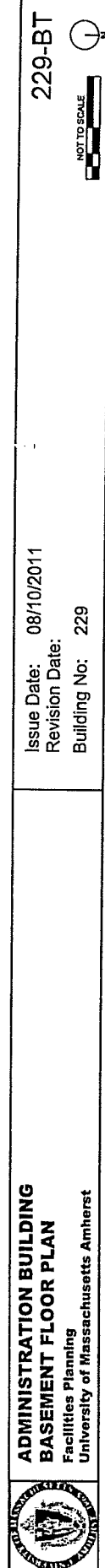
NOT TO SCALE











**240 Beaver Street – Basement and First Floor Office Measurements**

Office Room numbers per UMass 8/10/2011 Floor Plan (not actual numbers on doors)

**Basement Level, Room #1**

270 sq. ft

Office Rm 1: 18'x15'

**Basement Level, Room #7**

155.25 sq. ft

Office Rm 7: 13' 5" x  
11' 5"

**Basement Level, Room #8**

249.75 sq. ft

Office Rm. 8: 18' 5" x 13'  
5"

**Basement Level, Room #9**

117 sq. ft

Office Rm 9: 13' x 9'

**Basement Level, Room #10**

117 sq. ft

Office Rm 10: 13' x 9'

**First Floor, Room #108A**

121 sq. ft.

Office Rm  
108A  
11' x 11'

**First Floor, Room #110**

141.25 sq. ft

Office Rm  
110  
12.5' x 11.3'

**First Floor, Room #112**

270 sq. ft

Office Rm  
112  
18' x 15'

**First Floor, Room #117**

167.4 sq. ft

Office Rm  
117  
13.5' x 12.4'

**First Floor, Room #119**

266.5 sq. ft

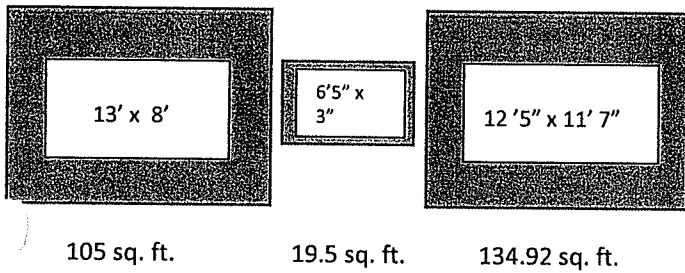
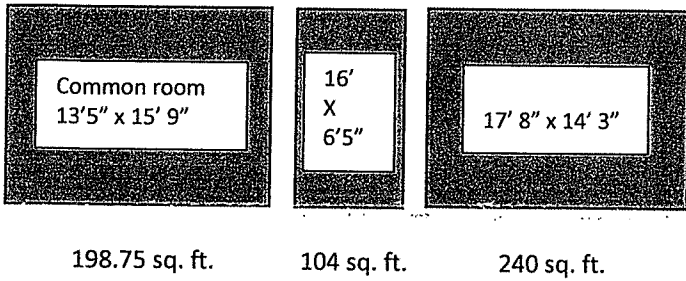
Office Rm  
119  
13' x 20.5'

Former 4-H Offices – 2<sup>nd</sup> Floor, Rooms 106 and 119 = Combined 951.67 sq. ft.

Office Room 106 = 149.5 sq. ft.

11' 5" x 13'

Office Room 119 = Combined 802.17 sq. ft.



**FY2019:**

Leased a combined 909 sq. ft. office space at \$13.20 sq. ft. = \$12,000/year

Actual Lease = \$20,550 (includes \$600 for storage closet and \$7,950 for 2 greenhouses and farm land)

**FY2020:**

Revised lease to reflect 1,207.17 sq. ft. office space at an estimated \$13.20/sq. ft. = \$15,935

**\*An increase of 298.17 sq. ft. from prior lease agreement (at \$13.20/sq.ft = \$3,935.85)**

FY2020 Lease Estimate:

\$15,935= Interior Lease estimate at current rate

+ \$7,950 = Exterior Acreage (land and utilities for 2 greenhouses and 8.25 acres of farm land)

+ \$600 = Storage Closet

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**= \$24,485/year**

**\*Estimated increase of \$3,935 annually for leased office space at 240 Beaver Street at current sq. ft and acreage rates**

## MEMORANDUM OF AGREEMENT AND GRANT OF LICENSE

This Memorandum of Agreement and Grant of License is entered into on this 26<sup>th</sup> day of May, 2021 by and between the **University of Massachusetts Amherst**, having an address of 181 Presidents Drive, Amherst, Massachusetts 01003 (the "University" or "Licensor"), and **Tufts University c/o Colin Orians**, having an address of 364 Robinson Hall, 200 College Avenue – Tufts University, Medford, MA 02155 (the "Licensee"). The University and the Licensee may be referred to herein collectively as the "Parties".

WHEREAS, the University is the owner of certain property located at 240 Beaver Street, Waltham, Massachusetts (the "University Property");

WHEREAS, the Licensee desires to use approximately one (1) acre of the University Property for irrigation testing (the "Licensed Premises"). The Licensed Premises is depicted in **Exhibit A**, attached hereto and incorporated herein by reference.

WHEREAS, the University is amenable to granting the Licensee the foregoing rights, subject to the terms and conditions set forth below;

NOW, THEREFORE, in exchange for the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged by the Parties, the Parties agree as follows:

1. Term of License. The Term of this License shall begin on June 1, 2021 and shall thereafter continue on a month-to-month basis, terminable by Licensor or Licensee upon thirty (30) days' prior written notice to the other party.
2. Terms of Use; Permitted Use. The Licensee may enter and use the Licensed Premises at any time and from time to time during the Term for irrigation testing and related work ("Permitted Use"). The Licensee shall not interfere unreasonably with the use of the University Property by the University and others entitled thereto and shall comply with any reasonable rules and regulations governing the use of the University Property.
3. Fee. In exchange for the rights granted herein, Licensee shall pay Fifty Dollars (\$50.00) per month to the University on or before the first of each month, beginning on June 1, 2021.
4. Release, Indemnification. The University makes no representations or warranties as to the condition of the Licensed Premises. The Licensee releases and holds the University harmless against any claim by any of the Licensee for any injury or damage arising from said entry. The Licensee shall defend, indemnify and hold harmless the University from any and all liabilities, damages, loss, costs expenses (including reasonable attorneys' fees), causes of action, suits, claims, demands or judgments arising out of or related to the negligence of any of the Licensee in connection with said entry, and/or other activities undertaken in connection with this License, the exercise of the rights granted by this License, or the release, emission, storage or maintenance by any of the Licensee of any Hazardous Materials on or near the Licensed

Premises during said entry, or activities undertaken in connection with this License. The provisions contained in this Section shall survive the expiration or termination of this License.

5. Insurance. The Licensee shall obtain public liability insurance, including coverage for bodily injury, wrongful death and property damage, in the minimum amount set forth herein to support the Licensee's Permitted Use of the Licensed Premises under the terms and conditions of this License, to indemnify, defend and hold harmless the University: General Liability: \$1,000,000.00/occurrence, \$2,000,000.00/aggregate; Bodily Injury Liability: \$1,000,000.00/occurrence, \$2,000,000.00/aggregate. Prior to entering the University Property the Licensee shall provide the University with a copy of such insurance policy in each case indicating the University is an additional insured on the policy and showing compliance with the foregoing provisions. The insurance coverage required hereunder shall be issued by insurance companies licensed by the Massachusetts Division of Insurance to do business in the Commonwealth of Massachusetts and having a Best's rating of B+ or better. The Licensee also shall obtain Vehicle Liability Insurance covering each vehicle of Licensee entering University Property in an amount not less than the compulsory coverage required in Massachusetts. The Licensee's failure to carry insurance shall be a material default of this License.

6. Termination. Either party may terminate this License upon thirty (30) days prior written notice to the other party.

7. Surrender. In the event that this License expires or is terminated, the Licensee shall, at its own expense, remove all its facilities, apparatus, equipment and property from the Licensed Premises, and shall restore the Licensed Premises to their original condition as at the commencement of this License, as nearly as possible. This obligation shall survive the expiration or termination of this License.

8. The Licensee shall not use, generate, store or dispose of any Hazardous Materials on, under, about or within the Licensed Premises in violation of any law or regulation. As used in this paragraph, "Hazardous Material" shall mean any oil, hazardous waste, substances or materials, or pollutants, as such terms are defined under any existing or future statutory or common law (including but not limited to Comprehensive Environmental, Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq., the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6901 et seq., the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, G.L. c. 21E, and all applicable rules and regulations promulgated thereunder).

9. Authorized Representatives. In any case in which an approval, decision or permission is needed from one of the parties pursuant to this License or in connection with the matters contemplated herein, the following persons are authorized hereby to give such approval, decision or permission for the respective party:

For the University:

Name: Steven Goodwin, Deputy Chancellor  
Address: Room 374, Whitmore Administration Building

Email: 181 Presidents Drive, Amherst, MA 01003  
sgoodwin@cns.umass.edu

For the Licensee:

Name: Tufts University c/o Colin Orians  
Boston Area Climate Experiment  
Address: 364 Robinson Hall  
200 College Avenue – Tufts University  
Medford, MA 02155  
Telephone: 617-627-3543  
Email: colin.orians@tufts.edu

10. No Estate or Obligation Created. This License shall not be construed as creating or vesting in the Licensee any estate in the Property, but only the limited right of use as hereinabove stated.

11. Modifications and Amendments. Modifications or amendments to this License shall be in writing and duly executed by all the parties hereto to be effective.

12. Governing Law. This License shall be governed and construed in accordance with the laws of the Commonwealth of Massachusetts.

13. Entire Agreement. This License represents the entire agreement between the Parties and supersedes all other written or unwritten agreements between the Parties.

IN WITNESS THEREOF, the parties have signed this Memorandum of Agreement on the date first written above.

TUFTS UNIVERSITY

UNIVERSITY OF MASSACHUSETTS,  
AMHERST

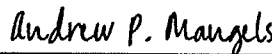
By: \_\_\_\_\_



Robert Chihade  
Director of Real Estate,  
Tufts University

By: \_\_\_\_\_

DocuSigned by:

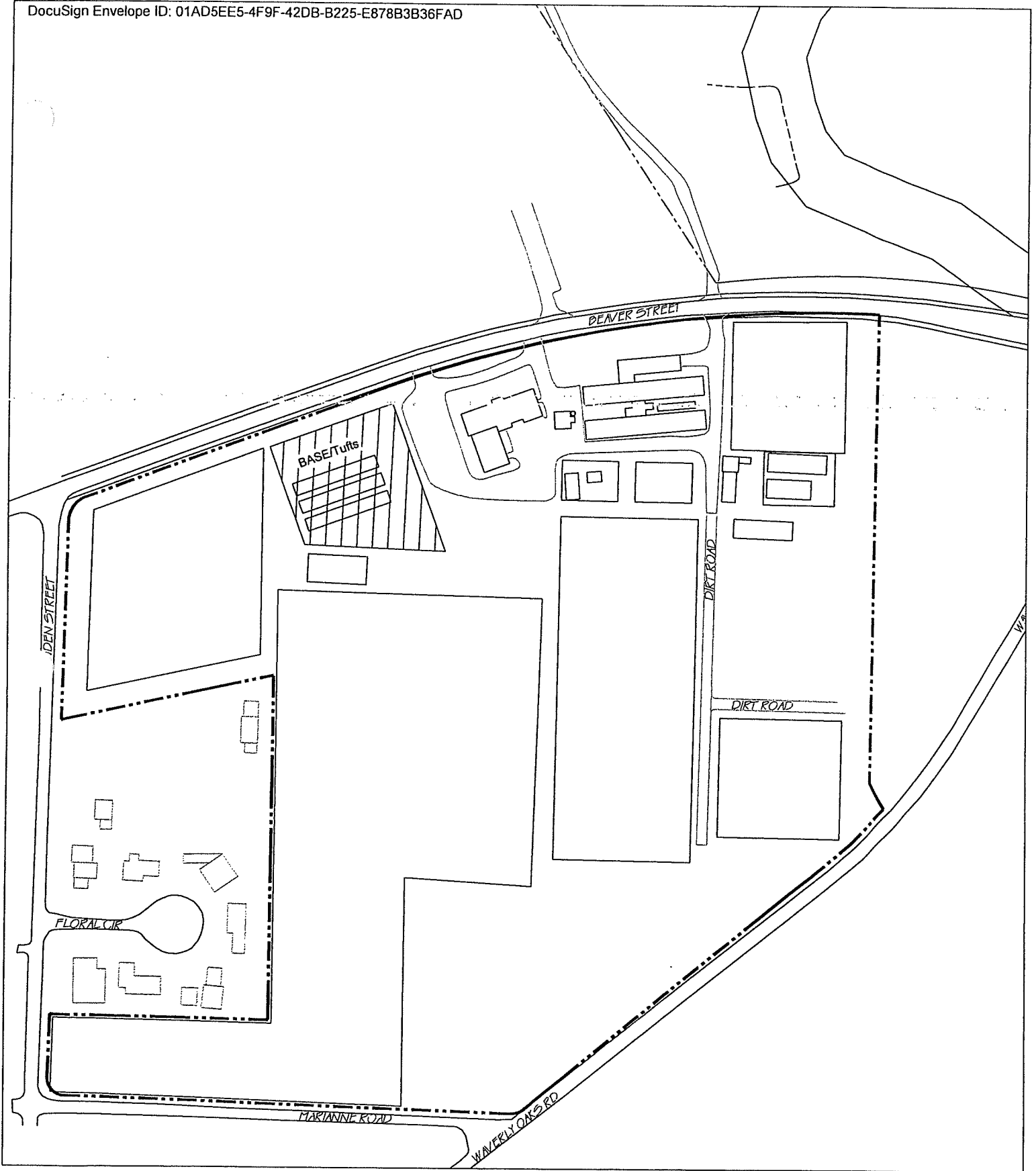


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Andrew P. Mangels  
Vice Chancellor for  
Administration & Finance



**EXHIBIT A**  
**MAP OF LICENSED PREMISES**



 Licensed Land

SCALE: 1"=200'  
0 50 100 200

**EXHIBIT A**  
B.A.S.E. / TUFTS  
LICENSED LAND

6/25/2020



UMass Campus Planning

## **Agreement and Conditions for Use of Office Facilities at the UMass Waltham Center**

This Agreement provides conditions for use of office space at the UMass Eastern Massachusetts Outreach Center. This agreement is between Grow Native Massachusetts (hereinafter Licensee), a non profit corporation and the University of Massachusetts (hereinafter referred to as the University).

WHEREAS, the University is the owner of certain real property located at 240 Beaver Street in Waltham and further described in Section 2 of this Agreement; and

WHEREAS, the University is responsible for the care, control and maintenance of said real property; and

WHEREAS, Licensee desires to enter upon said real property for the purposes described in this Agreement;

NOW, THEREFORE, the University hereby grants such entry and use subject to the following terms and conditions:

1. REFERENCE DATA:

Date of Agreement: July 31, 2018

Mailing Address of University:

Evan Pacosa  
318D Stockbridge Hall  
University of Massachusetts  
Amherst, MA 01003

Mailing Address of Licensee:

Grow Native Massachusetts  
c/o Claudia Thompson  
240 Beaver Street  
Waltham, MA 02453

Premises: Use of one office. These rooms, number 203 & 204, are located on the 2<sup>nd</sup> floor of the main building and demonstration garden area (approximately 50FT x 100FT) located in the "Rose Garden" area at 240 Beaver Street, Waltham, MA.

Permitted Use: The office will be used for administrative functions related to the mission of the organization. The garden will be used to demonstrate sustainable plantings.

2. LOCATION OF THE PREMISES

Entry and use are limited to the premises located at room 203 & 204.

3. PURPOSE AND USE

The rights of Licensee under this agreement shall be exercised solely for the following purposes: The office will be used for administrative functions related to the mission of the organization.

Specific rules governing access to and use of these facilities are attached as **Exhibit B** and are binding upon both parties.

4. CONDITION OF PREMISES

Licensee acknowledges and agrees that it accepts the Premises in "as is" condition, that Licensor is under no obligation to make any repairs, renovations, or alterations to the Premises, and that the University has made no representations or warranties regarding the fitness of the Premises for Licensee's intended purpose or use.

5. TERM

Term of Agreement: July 1, 2018 to December 31, 2019 unless otherwise terminated earlier in accordance with the terms of this Agreement.

The term of this Agreement may be extended on the following terms, subject to the prior written approval of the University: This Agreement will be reviewed annually on the anniversary date or date mutually agreeable to both parties.

This Agreement is revocable at any time upon thirty (30) days' written notice from either party to the other.

6. HOURS OF OPERATION

During the term of this Agreement, Licensee shall be permitted to operate and use the Premises for the purposes set forth in Section 3 and described in **Exhibit B**.

7. FEE

In consideration of the rights granted to Licensee under this agreement, Licensee shall pay the following Fee:

\$7,500.00

8. PERMITS

This agreement and all obligations hereunder are specifically dependent upon the

issuance to the Licensee of all permits and licenses required to operate and use the Premises for the purposes described in this Agreement from those governmental agencies having jurisdiction. It shall be the responsibility of Licensee to obtain any such permits or licenses, at Licensee's sole cost and expense. In the event Licensee is refused any such permit or license, this agreement shall be null and void with no further obligation by either party to perform. If any such permit or license is revoked or canceled during the term of this Agreement, it shall be cause for terminating this Agreement immediately as set forth in Section 18(c) hereof.

9. ALTERATION OF THE PREMISES

Licensee shall make no alterations or improvements upon the Premises except as may be specifically permitted in a separate Schedule attached to this License as **Exhibit C**. If no such Schedule is attached, Licensee shall not make any alterations or improvements upon the Premises after this Agreement has commenced unless Licensee has obtained the University's prior written approval, which may be withheld for any reason or for no reason in the University's sole discretion. Any alterations or improvements made by Licensee shall be made in accordance with the terms and conditions established by the University, which may include prior approval of plans, insurance coverage, and a requirement that Licensee remove any or all of its alterations or improvements upon the expiration or earlier termination of this Agreement. All such alterations or improvements remaining upon the Premises after the expiration of this License shall be subject to the provisions of Section 12 hereof. In any event, this Agreement does not for any purpose constitute the granting of an interest in real property and Licensee shall not have any right to make any permanent improvements to, or to install any permanent fixtures on, the Premises.

10. LICENSEE'S EQUIPMENT

Licensee may bring such vehicles and other equipment upon the premises as should ordinarily be used to operate and use the Premises for the purposes permitted by this Agreement, subject, however, to the following limitations outlined in **Exhibit B**.

11. UTILITIES

The University shall provide janitorial services for common areas of the buildings and general maintenance of the buildings and grounds. Heat, electric, water and sewer utilities are provided for the facilities as needed.

The University makes no representation as to the adequacy of utility systems for purposes of Licensee and shall not be responsible for any interruption in utility service.

12. CONDUCT OF LICENSEE

Non-interference with University Operations

Licensee shall at all times conduct itself so as not to interfere in any way with the operation of the University facility. Licensee agrees to observe and obey all directives given by

duly designated personnel of the University.

#### Compliance with Laws

Licensee shall at all times operate within the premises in accordance with all applicable laws, statutes, ordinances, regulations, permits, licenses, and requirements of its insurance policies.

#### Repair of Damage

Licensee shall neither cause nor suffer any waste of the premises and shall maintain the premises in good order at all times. The Licensee's responsibilities shall include, but not be limited to, the repair of any and all damage or breakage resulting from acts of vandalism or the intentional or negligent acts of the Licensee or others, but excluding damage or breakage caused by employees, agents or invitees of the University. All repairs made by Licensee shall be performed in a manner satisfactory to the University.

#### Sanitation

Licensee shall maintain the Premises in a sanitary condition and shall follow all directions of the University with regard to the collection and disposal of refuse as provided in **Exhibit B**.

#### Security

Licensee shall be responsible for providing, at its sole cost and expense, such security protection or services as may be reasonably necessary to protect the premises and Licensee's invitees from injury or damage.

#### Cost of Operations

Except as otherwise expressly set forth in this Agreement, Licensee shall be responsible for any and all costs and expenses associated with the exercise of its rights under this Agreement and its operations upon the Premises.

#### Operations Limited to Permitted Uses

Licensee shall not conduct, nor permit any of its employees, agents or invitees to conduct, any operations or business upon the Premises except for that permitted by Section 3 of this Agreement.

#### Hazardous Materials

Without limiting any of Licensee's obligations under this or any other Section of this Agreement, Licensee agrees that it shall not cause any hazardous materials to be used, generated, stored or disposed of on, under or about, or transported to or from the premises. For the purposes of this Agreement, "hazardous materials" shall include, but not be limited to substances defined as "hazardous substances", "toxic substances", "hazardous wastes", "hazardous materials", or "oil" in any federal or state statute concerning hazardous materials now or hereafter enacted, including all regulations adopted or publications promulgated thereunder.

Licensee's involved in research and plant propagation may use licensed pesticides, subject to all regulations. Plans for use and storage must be approved annually by Robert

Schrader.

#### Alcoholic Beverages

Unless specifically permitted by the terms of this Agreement, Licensee shall not serve alcoholic beverages upon the Premises, nor allow any of its employees, agents, contractors or invitees to bring or consume alcoholic beverages upon the Premises.

#### Surrender of Premises

Upon the expiration or earlier termination of this Agreement, Licensee shall immediately vacate and surrender the Premises to the University. However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises. Licensee shall also remove all of its property from the Premises and restore the Premises to the condition the Premises were in at the commencement of this Agreement, reasonable wear and tear excepted, and subject further to any obligation Licensee may have hereunder to make repairs or improvements to the Premises. Upon agreement of the parties, Licensee may abandon all or part of its property in place. In the event any of Licensee's personal property remains on the Premises after the expiration or earlier termination of this Agreement without a written agreement between the parties, said property shall be deemed abandoned and may be retained by University without any compensation to Licensee, or may be removed and either stored or disposed of by the University at the sole cost and expense of Licensee.

#### 13. INDEMNIFICATION

Not Applicable

#### 14. RISK OF LOSS

Licensee agrees that it shall use and occupy the Premises at its own risk, and the University shall not be liable to Licensee for any loss or damage to vehicles, equipment, fixtures, or other personal property of the Licensee that are brought upon the Premises. Without limiting the foregoing, the University shall have no liability to Licensee for any injury, loss or damage caused by any act of Licensee's invitees or members of the general public.

#### 15. INSURANCE

The Licensee shall keep in force, at its sole cost and expense, during the full term of this License, and during such other times as Licensee occupies the Premises or any part thereof, the following insurance policies:

- A. Comprehensive public liability insurance in an amount as required by Massachusetts law.
- B. Vehicle Liability Insurance covering each vehicle of Licensee entering the Premises in an amount as required by Massachusetts law.

C. Workers Compensation Insurance covering Licensee's employees upon the Premises in such amounts as are required by law.

D. Such other types of insurance and in such amounts as the University may, from time to time, require in its reasonable judgment.

One or more certificates of insurance showing insurance coverage as required by this Section 15 are attached to this license as Exhibit D.

The insurance coverage required by this Section shall be by standard policies, obtained from financially sound and responsible insurance companies authorized to do business in Massachusetts. In the event Licensee fails to obtain any of the insurance coverage required by this section, or if any of the required insurance policies are canceled, it shall be grounds for immediate termination of this Agreement as provided in Section 18(c) of this agreement.

#### 16. ASSIGNMENT

The Licensee shall not sell, assign, sublet, mortgage or transfer any interest in this Agreement or any part of the Premises without obtaining, in each instance, the prior written consent of the University, which consent may be withheld for any reason or for no reason, or granted upon such conditions as the University shall determine, all in its sole discretion.

#### 17. RIGHTS OF UNIVERSITY AND AGENCY TO ENTER

The University reserves the right and the Licensee shall permit the University or its employees or agents to enter upon the Premises at any time to make repairs, perform maintenance, inspect the Premises, show the Premises to others, monitor compliance with this Agreement, or for any other reason.

#### 18. TERMINATION

This Agreement shall expire on the date specified in Section 5, unless extended in compliance with the terms of this Agreement and all other requirements of law, or unless terminated earlier under the following conditions:

A. Without Cause. Either Licensee or the University may terminate this Agreement by giving written notice to the other party at least thirty (30) calendar days prior to the effective date of termination stated in the notice.

B. For Cause. If, in the opinion of University, Licensee fails to fulfill its obligations, The University may terminate this Agreement by giving written notice to the Licensee at least five (5) calendar days before the effective date of termination stated in the notice. The notice shall specify in reasonable detail the nature of Licensee's breach. The notice may also state a period during which the breach may be cured by Licensee, provided that such period shall expire on or before the termination date stated in the notice. In the event the Licensee is given an opportunity to cure its breach (which shall be within the sole discretion of the University) and Licensee fails



to complete such cure to the satisfaction of the University within the cure period, this Agreement shall come to an end on the termination date stated in the notice.

C. Emergency. In the event the University determines that it is necessary to terminate this Agreement or suspend Licensee's rights hereunder immediately in order to prevent injury or damage to persons or property, including the interest of the University in the Premises, the University may terminate this Agreement or suspend Licensee's rights hereunder by providing written notice to Licensee stating the grounds for said termination or suspension. Said notice may be given in the form of a telegram, mailgram, hand-carried letter, or other reasonable written means, and this License shall be terminated or suspended, as the case may be, upon delivery of said notice to Licensee.

In the event this Agreement is terminated in accordance with any of the provisions of this Section 18, this Agreement shall come to an end as fully and completely as if the term had expired on the date set forth in Section 5, and Licensee shall vacate and surrender the Premises as provided in Section 12.

In the event this Agreement is terminated by the University in accordance with any of the provisions of this Section 18, Licensee shall not be relieved of liability to the University for arrears in the License fees or for any other injury or damage sustained by the University as a result of a breach of Licensee of any of the terms or conditions of this Agreement, whether occurring before or after such termination. Licensee expressly waives any right to damages related to such termination, including incidental or consequential damages. If this Agreement is terminated for any reason that is not the fault of Licensee, then the fee which the Licensee has covenanted to pay, if any, shall be commensurately reduced by the University on a pro rata per diem basis, and Licensee shall receive a refund of any portion of the Agreement Fee that has been prepaid for a period during which the Licensee was denied use and occupancy of the Premises.

19. NO ESTATE CREATED

This Agreement shall not be construed as creating or vesting in Licensee any estate in the Premises, but only the limited right of possession as herein described, and Licensee shall have no right to require specific performance of the obligation of the University hereunder.

20. NON-DISCRIMINATION

Licensee shall not discriminate against any qualified employee, applicant for employment, subcontractor, or person or firm seeking to provide goods or services to Licensee, nor shall Licensee deny any person access to the Premises or to any activities or programs carried out pursuant to this Agreement because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation. The Licensee shall comply with all applicable federal and state statutes, rules, and regulations prohibiting discrimination in employment.

21. NOTICE

All notices or other communications required or permitted to be given under this Agreement shall, unless otherwise expressly permitted hereunder, be in writing signed by a duly authorized representative of the party giving the notice and shall be given by hand delivery (including, without limitation, courier, Federal Express, or other overnight delivery service) or mailed by United States certified mail, postage prepaid, return receipt requested. Such notices shall be sent or addressed to the University and Licensee at the addresses set forth in Section 1.

## 22. MISCELLANEOUS PROVISIONS

This Agreement may not be modified except in writing, duly executed by both parties.

This Agreement contains the entire agreement of the parties and there are no other agreements or understandings between the parties regarding the subject matter of this Agreement.

The University, its employees, officers or agents, are not authorized to bind or involve the Licensee or the Commonwealth of Massachusetts in any contract or to incur any liability for or on the part of the Licensee or the Commonwealth of Massachusetts.

If any portion of this Agreement is declared to be illegal, unenforceable or void, then all parties to this Agreement shall be relieved of all obligations under that portion; provided, however, that the remainder of this agreement shall be enforced to the fullest extent permitted by law.

No consent or waiver, whether express or implied, by the University to or of any breach of the terms of this Agreement by Licensee shall be construed as a consent or waiver to or of any other breach. No waiver of any breach or default or other indulgence shall be effective unless expressed in writing by the University.

The captions in this Agreement are inserted for convenience of reference only and in no way define, describe or limit the scope or intent of this Agreement or any of the provisions hereof.

No official, employee or consultant of the Commonwealth of Massachusetts (including any Trustee of the University of Massachusetts) shall be personally liable to Licensee or to any person claiming under or through Licensee for or on account of any alleged breach of this Agreement, or for any act, failure to act or other matter arising out of the execution of this Agreement or the performance of Licensee's obligations hereunder.

This Agreement shall be governed by, and construed in accordance with the laws of the Commonwealth of Massachusetts, and any and all legal actions brought in connection with this Agreement shall be brought in courts within the Commonwealth of Massachusetts.

No provision of this Agreement shall be deemed to have been waived by either party unless such waiver is in writing and is signed by the party to be charged.

This Agreement is to take effect as a sealed instrument.

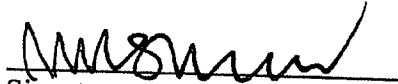
The following exhibits and attachments are made a part of this Agreement for all purposes:

- Exhibit A - Plan or Diagram of Premises to be Utilized by Licensee
- X   Exhibit B - Specific Rules Governing Access and Use of Facility
- Exhibit C - Schedule of Permitted Alterations and Improvements
- X   Exhibit D - Insurance Certificate(s)

**AGREED AND ACCEPTED**

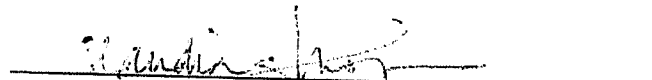
**UNIVERSITY OF  
MASSACHUSETTS:**

**LICENSEE:**

  
\_\_\_\_\_  
Signature

Joe Shoenfeld, Associate Director  
Center for Agriculture, Food and the  
Environment  
University of Massachusetts

8/29/18  
Date

  
\_\_\_\_\_  
Authorized Signature

Claudia Thompson  
Grow Native Massachusetts

9/6/2018  
Date



## **Exhibit B     Use of Grounds and Land at UMass Waltham, 240 Beaver Street, Waltham, Mass.**

### **Specific Rules Governing Access To and Use of Facility**

The following rules apply to use of the facility. All communications related to compliance with use rules and requests for permitted variances should be directed to Facility Manager (Tony Mazzeo) at the facility.

#### **General Rules:**

**Civility and Adherence to Rules:** Licensees are responsible for actions of their staff, guests and general public invited onto premises. Licensee is responsible for ensuring compliance with all facility rules.

**Hours of Operation:** Facility is open to licensees and their guests. The building is accessible from 6 AM-11 PM. Outside grounds are accessible from 6 AM till dark.

**Parking:** Parking is generally available in lots surrounding the building. No parking is allowed on the grass without prior approval. No vehicles are to be left overnight without prior approval.

**Persons Authorized to Have Access to Facility:** Each licensee is to provide to the Facility Manager a list of persons who will have regular access to the facility. All persons having regular access to the building must be over the age of 18. For persons utilizing space within the buildings this list will specifically identify those who are to receive building keys.

**Special Events:** Special events, such as plant sales, shows, educational programs and community events, which will use additional areas of the facility are permitted, subject to the approval of the University. Use of the facility can be scheduled through the Facility Manager. Additional fees may be charged to cover related costs to the University, such as staff time, rubbish removal, etc.

### **Operational Rules for Organizations Using the Grounds and Land**

**Facility Access:** The grounds are open to licensees from 6 AM - dark. Cars are to be driven onto grass areas only to load and unload materials or for handicapped access. Parking areas for handicapped access will be identified in advance.

**Staff Services:** University staff are responsible for operation and maintenance of the facility. University staff do not provide plant production or administrative services. Each organization must provide their own labor and related services.

**Rubbish and Organic Materials Removal:** Licensee is responsible for removing rubbish and recyclable materials to dumpsters and/or receptacles for recycling. Plant waste and related organic materials are to be discarded in areas identified by the facility manager.

**Site Maintenance & Appearance:** Assigned area must appear neat, clean, and orderly throughout the year. Refuse cannot be left at the site. End of the season clean-up is required. Details for clean-up and closing of land operations will be provided.

**Water and Utilities:** Water is generally provided to each site. Water conservation must be practiced. Water leaks are to be reported to the Facility Manager. All groups using more than an acre of land and the community garden group (GROW) will provide their own water meter in order to monitor use. The University will limit water use as deemed necessary.

**Alterations and Changes in Use of the Land:** The land can only be used for the purpose stated in the application form and Agreement. Any changes in use or changes to the land or landscape must be requested in writing to the Facility Manager. This includes pruning any surrounding trees or shrubs and adding structures, fencing, trellises or related items.

**Signage:** Small descriptive signs are to be posted at the site, identifying the organization, use of the land (purpose) and contact person for further information.

**Contacts and Communications:** All issues related to building and facility use should be brought to the attention of the Facility Manager, Tony Mazzeo.

Joe Shoenfeld  
Associate Director, UMass Center for Agriculture, Food and the Environment  
July, 2018



# CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)  
08/01/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Aon Risk Services Northeast, Inc. Providence RI Office 100 Westminster Street, 10th Floor Providence RI 02903-2393 USA	<b>CONTACT</b> NAME: PHONE (A/C. No. Ext.): (866) 283-7122 FAX (A/C. No.): (800) 363-0105 E-MAIL ADDRESS:	
	<b>INSURER(S) AFFORDING COVERAGE</b> INSURER A: United Educators Ins, a Reciprocal RRG INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:	
<b>INSURED</b> University of Massachusetts 333 South Street, Suite 450 Shrewsbury MA 01545 USA	NAIC # 10020	

Holder Identifier :

COVERAGES CERTIFICATE NUMBER: 570072548348 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVO	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			U4075A SIR applies per policy terms & conditions	05/01/2018	05/01/2019	EACH OCCURRENCE \$750,000 DAMAGE TO RENTED PREMISES (Ea occurrence) Included MED EXP (Any one person) Excluded PERSONAL & ADV INJURY Included GENERAL AGGREGATE \$3,000,000 PRODUCTS - COMP/OP AGG Included SIR \$250,000
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
A	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$1,000,000			U4075A	05/01/2018	05/01/2019	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/> N/A					PER STATUTE E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT

Certificate No.: 570072548348

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

## CERTIFICATE HOLDER

## CANCELLATION

Grow Native Massachusetts Attn: Claudia Thompson 240 Beaver Street Waltham MA 02452 USA	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE <i>Aon Risk Services Northeast, Inc.</i>

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ACORD 25 (2016/03)

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## FIRST EXTENSION OF LICENSE AGREEMENT

This First Extension of License Agreement ("First Extension") is made on January 30, 2020 by and between the University of Massachusetts Amherst ("University") and Grow Native Massachusetts ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. Section 1 (Reference Data) of the Agreement shall be modified by deleting the Mailing Address of the University currently listed and replacing same with: *"Steven Goodwin, Whitmore Administration Building Room 347, 181 Presidents Drive, Amherst, MA 01003"*.
2. TERM: The term of the Agreement shall be extended through December 31, 2020.
3. PREMISES: Rooms 207 and 208 are added to the rooms available for use by the Licensee.
4. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of Five Thousand and 00/100 Dollars (\$5,000.00), payable in advance in monthly installments of Four Hundred Sixteen Dollars and Sixty-seven cents (\$416.67) per month.
5. Section 12 (Surrender of Premises) is hereby amended by deleting the following language in its entirety: *"However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises."*
6. Section 12 (Hazardous Materials) is hereby amended to replace *"Robert Schrader"* with *"the University's Environmental Health & Safety Office"*.
7. Section 15 (Insurance) is hereby amended to add the following to the end of the section: *"All certificates of insurance from Licensee shall list the University as an additional insured."*

8. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first written above.

UNIVERSITY:  
UNIVERSITY OF MASSACHSETTS

By: \_\_\_\_\_  
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

LICENSEE:  
GROW NATIVE MASSACHUSETTS

By: Mark D. Smith  
Name: Mark D. Smith  
Title: President



# CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)  
08/01/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER  
Aon Risk Services Northeast, Inc.  
Providence RI Office  
100 Westminster Street, 10th Floor  
Providence RI 02903-2393 USA

CONTACT  
NAME:  
PHONE (A/C. No. Ext): (866) 283-7122 FAX (A/C. No.): (800) 363-0105  
E-MAIL ADDRESS:

INSURED  
University of Massachusetts  
333 South Street, Suite 450  
Shrewsbury MA 01545 USA

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: United Educators Ins, a Reciprocal RRG	10020
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	
INSURER F:	

## COVERAGES

CERTIFICATE NUMBER: 570072548348

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			U4075A SIR applies per policy terms & conditions	05/01/2018	05/01/2019	EACH OCCURRENCE \$750,000 DAMAGE TO RENTED PREMISES (Ea occurrence) Included MED EXP (Any one person) Excluded PERSONAL & ADV INJURY Included GENERAL AGGREGATE \$3,000,000 PRODUCTS - COMPI/OP AGG Included SIR \$250,000
	AUTOMOBILE LIABILITY  <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
A	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$1,000,000			U4075A	05/01/2018	05/01/2019	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A				PER STATUTE OTHER E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

## CERTIFICATE HOLDER

## CANCELLATION

Grow Native Massachusetts  
Attn: Claudia Thompson  
240 Beaver Street  
Waltham MA 02452 USA

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

*Aon Risk Services Northeast, Inc.*

## **Agreement and Conditions for Use of Office Facilities at the UMass Waltham Center**

This Agreement provides conditions for use of office space at the UMass Eastern Massachusetts Outreach Center. This agreement is between Boston Area Gleaners (hereinafter Licensee), a non profit corporation, and the University of Massachusetts (hereinafter referred to as the University).

WHEREAS, the University is the owner of certain real property located at 240 Beaver Street in Waltham and further described in Section 2 of this Agreement; and

WHEREAS, the University is responsible for the care, control and maintenance of said real property; and

WHEREAS, Licensee desires to enter upon said real property for the purposes described in this Agreement;

NOW, THEREFORE, the University hereby grants such entry and use subject to the following terms and conditions:

1. REFERENCE DATA:

Date of Agreement: July 31, 2018

Mailing Address of University:

Evan Pacosa  
318D Stockbridge Hall  
University of Massachusetts  
Amherst, MA 01003

Mailing Address of Licensee:

Boston Area Gleaners  
240 Beaver Street  
Waltham, MA 02452

Premises: Use of four offices. These rooms, number 201, 202, 211, & 212, are located on the 2<sup>nd</sup> floor of the main building at 240 Beaver Street, Waltham, MA.

Permitted Use: The office will be used for administrative functions related to the mission of the organization.

Consideration to be Paid by Licensee: \$15,000.00 for office



The Center for  
Agriculture,  
Food and the  
Environment

UMass Extension  
Mass. Water Resources Research Center  
Mass. Agricultural Experiment Station  
UMass Research and Education Farms

Office of the Director • Stockbridge Hall • 80 Campus Center Way • Amherst, MA 01003-9246 • p: 413.545.4800 • f: 413.545.6555 • ag.umass.edu

August 20, 2018

Ms. Laurie Caldwell  
Executive Director  
Boston Area Gleaners  
240 Beaver Street  
Waltham, MA 02452

Dear Laurie,

Enclosed please find a License agreement for land and offices at Waltham for the period July 1, 2018, - December 31, 2019. The license fee is \$15,000.

Please note that there is a copy of Exhibit B attached to this agreement. Please note that the only substantive change to this document from the past is the addition, in the fourth rule listed, of the sentence: "All persons having regular access to the building must be over the age of 18."

Please sign and return one copy of the license agreement to me along with a copy of insurance certificates for liability and workman's compensation (if applicable). Sending by signed PDF is OK. The invoice for the office space at Waltham will be sent by the Business Office semiannually. Payment should be sent directly to my attention. Please also send a copy of your insurance binder naming UMass as an insured.

Please let me know if you have any questions regarding the license or invoice information.

Sincerely,

Evan Pacosa  
College of Natural Sciences  
Business Office

UMASS  
AMHERST

The Center for Agriculture, Food and the Environment and its units are equal opportunity providers and employers, United States Department of Agriculture cooperating. Contact your local Extension office for information on disability accommodations. Contact the State Center Director's Office if you have concerns related to discrimination, 413-545-4800 or see [ag.umass.edu/civil-rights-information/civil-rights-information-resources](http://ag.umass.edu/civil-rights-information/civil-rights-information-resources).

2. LOCATION OF THE PREMISES

Entry and use are limited to the premises located at rooms 201, 202, 211, & 212.

3. PURPOSE AND USE

The rights of Licensee under this agreement shall be exercised solely for the following purposes: The office will be used for administrative functions related to the mission of the organization.

Specific rules governing access to and use of these facilities are attached as **Exhibit B** and are binding upon both parties.

4. CONDITION OF PREMISES

Licensee acknowledges and agrees that it accepts the Premises in "as is" condition, that Licensor is under no obligation to make any repairs, renovations, or alterations to the Premises, and that the University has made no representations or warranties regarding the fitness of the Premises for Licensee's intended purpose or use.

5. TERM

Term of Agreement: July 1, 2018 to December 31, 2019 unless otherwise terminated earlier in accordance with the terms of this Agreement.

The term of this Agreement may be extended on the following terms, subject to the prior written approval of the University: This Agreement will be reviewed annually on the anniversary date or date mutually agreeable to both parties.

This Agreement is revocable at any time upon thirty (30) days' written notice from either party to the other.

6. HOURS OF OPERATION

During the term of this Agreement, Licensee shall be permitted to operate and use the Premises for the purposes set forth in Section 3 and described in **Exhibit B**.

7. FEE

In consideration of the rights granted to Licensee under this agreement, Licensee shall pay the following Fee:

\$10,000.00

8. PERMITS

This agreement and all obligations hereunder are specifically dependent upon the

issuance to the Licensee of all permits and licenses required to operate and use the Premises for the purposes described in this Agreement from those governmental agencies having jurisdiction. It shall be the responsibility of Licensee to obtain any such permits or licenses, at Licensee's sole cost and expense. In the event Licensee is refused any such permit or license, this agreement shall be null and void with no further obligation by either party to perform. If any such permit or license is revoked or canceled during the term of this Agreement, it shall be cause for terminating this Agreement immediately as set forth in Section 18(c) hereof.

9. ALTERATION OF THE PREMISES

Licensee shall make no alterations or improvements upon the Premises except as may be specifically permitted in a separate Schedule attached to this License as **Exhibit C**. If no such Schedule is attached, Licensee shall not make any alterations or improvements upon the Premises after this Agreement has commenced unless Licensee has obtained the University's prior written approval, which may be withheld for any reason or for no reason in the University's sole discretion. Any alterations or improvements made by Licensee shall be made in accordance with the terms and conditions established by the University, which may include prior approval of plans, insurance coverage, and a requirement that Licensee remove any or all of its alterations or improvements upon the expiration or earlier termination of this Agreement. All such alterations or improvements remaining upon the Premises after the expiration of this License shall be subject to the provisions of Section 12 hereof. In any event, this Agreement does not for any purpose constitute the granting of an interest in real property and Licensee shall not have any right to make any permanent improvements to, or to install any permanent fixtures on, the Premises.

10. LICENSEE'S EQUIPMENT

Licensee may bring such vehicles and other equipment upon the premises as should ordinarily be used to operate and use the Premises for the purposes permitted by this Agreement, subject, however, to the following limitations outlined in **Exhibit B**.

11. UTILITIES

The University shall provide janitorial services for common areas of the buildings and general maintenance of the buildings and grounds. Heat, electric, water and sewer utilities are provided for the facilities as needed.

The University makes no representation as to the adequacy of utility systems for purposes of Licensee and shall not be responsible for any interruption in utility service.

12. CONDUCT OF LICENSEE

Non-interference with University Operations

Licensee shall at all times conduct itself so as not to interfere in any way with the operation of the University facility. Licensee agrees to observe and obey all directives given by



duly designated personnel of the University.

#### Compliance with Laws

Licensee shall at all times operate within the premises in accordance with all applicable laws, statutes, ordinances, regulations, permits, licenses, and requirements of its insurance policies.

#### Repair of Damage

Licensee shall neither cause nor suffer any waste of the premises and shall maintain the premises in good order at all times. The Licensee's responsibilities shall include, but not be limited to, the repair of any and all damage or breakage resulting from acts of vandalism or the intentional or negligent acts of the Licensee or others, but excluding damage or breakage caused by employees, agents or invitees of the University. All repairs made by Licensee shall be performed in a manner satisfactory to the University.

#### Sanitation

Licensee shall maintain the Premises in a sanitary condition and shall follow all directions of the University with regard to the collection and disposal of refuse as provided in **Exhibit B**.

#### Security

Licensee shall be responsible for providing, at its sole cost and expense, such security protection or services as may be reasonably necessary to protect the premises and Licensee's invitees from injury or damage.

#### Cost of Operations

Except as otherwise expressly set forth in this Agreement, Licensee shall be responsible for any and all costs and expenses associated with the exercise of its rights under this Agreement and its operations upon the Premises.

#### Operations Limited to Permitted Uses

Licensee shall not conduct, nor permit any of its employees, agents or invitees to conduct, any operations or business upon the Premises except for that permitted by Section 3 of this Agreement.

#### Hazardous Materials

Without limiting any of Licensee's obligations under this or any other Section of this Agreement, Licensee agrees that it shall not cause any hazardous materials to be used, generated, stored or disposed of on, under or about, or transported to or from the premises. For the purposes of this Agreement, "hazardous materials" shall include, but not be limited to substances defined as "hazardous substances", "toxic substances", "hazardous wastes", "hazardous materials", or "oil" in any federal or state statute concerning hazardous materials now or hereafter enacted, including all regulations adopted or publications promulgated thereunder.

Licensee's involved in research and plant propagation may use licensed pesticides, subject to all regulations. Plans for use and storage must be approved annually by Robert

Schrader.

Alcoholic Beverages

Unless specifically permitted by the terms of this Agreement, Licensee shall not serve alcoholic beverages upon the Premises, nor allow any of its employees, agents, contractors or invitees to bring or consume alcoholic beverages upon the Premises.

Surrender of Premises

Upon the expiration or earlier termination of this Agreement, Licensee shall immediately vacate and surrender the Premises to the University. However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises. Licensee shall also remove all of its property from the Premises and restore the Premises to the condition the Premises were in at the commencement of this Agreement, reasonable wear and tear excepted, and subject further to any obligation Licensee may have hereunder to make repairs or improvements to the Premises. Upon agreement of the parties, Licensee may abandon all or part of its property in place. In the event any of Licensee's personal property remains on the Premises after the expiration or earlier termination of this Agreement without a written agreement between the parties, said property shall be deemed abandoned and may be retained by University without any compensation to Licensee, or may be removed and either stored or disposed of by the University at the sole cost and expense of Licensee.

13. INDEMNIFICATION

Not Applicable

14. RISK OF LOSS

Licensee agrees that it shall use and occupy the Premises at its own risk, and the University shall not be liable to Licensee for any loss or damage to vehicles, equipment, fixtures, or other personal property of the Licensee that are brought upon the Premises. Without limiting the foregoing, the University shall have no liability to Licensee for any injury, loss or damage caused by any act of Licensee's invitees or members of the general public.

15. INSURANCE

The Licensee shall keep in force, at its sole cost and expense, during the full term of this License, and during such other times as Licensee occupies the Premises or any part thereof, the following insurance policies:

- A. Comprehensive public liability insurance in an amount as required by Massachusetts law.
- B. Vehicle Liability Insurance covering each vehicle of Licensee entering the Premises in an amount as required by Massachusetts law.

C. Workers Compensation Insurance covering Licensee's employees upon the Premises in such amounts as are required by law.

D. Such other types of insurance and in such amounts as the University may, from time to time, require in its reasonable judgment.

One or more certificates of insurance showing insurance coverage as required by this Section 15 are attached to this license as **Exhibit D**.

The insurance coverage required by this Section shall be by standard policies, obtained from financially sound and responsible insurance companies authorized to do business in Massachusetts. In the event Licensee fails to obtain any of the insurance coverage required by this section, or if any of the required insurance policies are canceled, it shall be grounds for immediate termination of this Agreement as provided in Section 18(c) of this agreement.

#### 16. ASSIGNMENT

The Licensee shall not sell, assign, sublet, mortgage or transfer any interest in this Agreement or any part of the Premises without obtaining, in each instance, the prior written consent of the University, which consent may be withheld for any reason or for no reason, or granted upon such conditions as the University shall determine, all in its sole discretion.

#### 17. RIGHTS OF UNIVERSITY AND AGENCY TO ENTER

The University reserves the right and the Licensee shall permit the University or its employees or agents to enter upon the Premises at any time to make repairs, perform maintenance, inspect the Premises, show the Premises to others, monitor compliance with this Agreement, or for any other reason.

#### 18. TERMINATION

This Agreement shall expire on the date specified in Section 5, unless extended in compliance with the terms of this Agreement and all other requirements of law, or unless terminated earlier under the following conditions:

A. Without Cause. Either Licensee or the University may terminate this Agreement by giving written notice to the other party at least thirty (30) calendar days prior to the effective date of termination stated in the notice.

B. For Cause. If, in the opinion of University, Licensee fails to fulfill its obligations, The University may terminate this Agreement by giving written notice to the Licensee at least five (5) calendar days before the effective date of termination stated in the notice. The notice shall specify in reasonable detail the nature of Licensee's breach. The notice may also state a period during which the breach may be cured by Licensee, provided that such period shall expire on or before the termination date stated in the notice. In the event the Licensee is given an opportunity to cure its breach (which shall be within the sole discretion of the University) and Licensee fails

to complete such cure to the satisfaction of the University within the cure period, this Agreement shall come to an end on the termination date stated in the notice.

C. Emergency. In the event the University determines that it is necessary to terminate this Agreement or suspend Licensee's rights hereunder immediately in order to prevent injury or damage to persons or property, including the interest of the University in the Premises, the University may terminate this Agreement or suspend Licensee's rights hereunder by providing written notice to Licensee stating the grounds for said termination or suspension. Said notice may be given in the form of a telegram, mailgram, hand-carried letter, or other reasonable written means, and this License shall be terminated or suspended, as the case may be, upon delivery of said notice to Licensee.

In the event this Agreement is terminated in accordance with any of the provisions of this Section 18, this Agreement shall come to an end as fully and completely as if the term had expired on the date set forth in Section 5, and Licensee shall vacate and surrender the Premises as provided in Section 12.

In the event this Agreement is terminated by the University in accordance with any of the provisions of this Section 18, Licensee shall not be relieved of liability to the University for arrears in the License fees or for any other injury or damage sustained by the University as a result of a breach of Licensee of any of the terms or conditions of this Agreement, whether occurring before or after such termination. Licensee expressly waives any right to damages related to such termination, including incidental or consequential damages. If this Agreement is terminated for any reason that is not the fault of Licensee, then the fee which the Licensee has covenanted to pay, if any, shall be commensurately reduced by the University on a pro rata per diem basis, and Licensee shall receive a refund of any portion of the Agreement Fee that has been prepaid for a period during which the Licensee was denied use and occupancy of the Premises.

19. NO ESTATE CREATED

This Agreement shall not be construed as creating or vesting in Licensee any estate in the Premises, but only the limited right of possession as herein described, and Licensee shall have no right to require specific performance of the obligation of the University hereunder.

20. NON-DISCRIMINATION

Licensee shall not discriminate against any qualified employee, applicant for employment, subcontractor, or person or firm seeking to provide goods or services to Licensee, nor shall Licensee deny any person access to the Premises or to any activities or programs carried out pursuant to this Agreement because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation. The Licensee shall comply with all applicable federal and state statutes, rules, and regulations prohibiting discrimination in employment.

21. NOTICE

All notices or other communications required or permitted to be given under this Agreement shall, unless otherwise expressly permitted hereunder, be in writing signed by a duly authorized representative of the party giving the notice and shall be given by hand delivery (including, without limitation, courier, Federal Express, or other overnight delivery service) or mailed by United States certified mail, postage prepaid, return receipt requested. Such notices shall be sent or addressed to the University and Licensee at the addresses set forth in Section 1.

## 22. MISCELLANEOUS PROVISIONS

This Agreement may not be modified except in writing, duly executed by both parties.

This Agreement contains the entire agreement of the parties and there are no other agreements or understandings between the parties regarding the subject matter of this Agreement.

The University, its employees, officers or agents, are not authorized to bind or involve the Licensee or the Commonwealth of Massachusetts in any contract or to incur any liability for or on the part of the Licensee or the Commonwealth of Massachusetts.

If any portion of this Agreement is declared to be illegal, unenforceable or void, then all parties to this Agreement shall be relieved of all obligations under that portion; provided, however, that the remainder of this agreement shall be enforced to the fullest extent permitted by law.

No consent or waiver, whether express or implied, by the University to or of any breach of the terms of this Agreement by Licensee shall be construed as a consent or waiver to or of any other breach. No waiver of any breach or default or other indulgence shall be effective unless expressed in writing by the University.

The captions in this Agreement are inserted for convenience of reference only and in no way define, describe or limit the scope or intent of this Agreement or any of the provisions hereof.

No official, employee or consultant of the Commonwealth of Massachusetts (including any Trustee of the University of Massachusetts) shall be personally liable to Licensee or to any person claiming under or through Licensee for or on account of any alleged breach of this Agreement, or for any act, failure to act or other matter arising out of the execution of this Agreement or the performance of Licensee's obligations hereunder.

This Agreement shall be governed by, and construed in accordance with the laws of the Commonwealth of Massachusetts, and any and all legal actions brought in connection with this Agreement shall be brought in courts within the Commonwealth of Massachusetts.

No provision of this Agreement shall be deemed to have been waived by either party unless such waiver is in writing and is signed by the party to be charged.

This Agreement is to take effect as a sealed instrument.

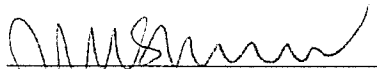
The following exhibits and attachments are made a part of this Agreement for all purposes:

- ☐ Exhibit A - Plan or Diagram of Premises to be Utilized by Licensee
- ☒ Exhibit B - Specific Rules Governing Access and Use of Facility
- ☐ Exhibit C - Schedule of Permitted Alterations and Improvements
- ☒ Exhibit D - Insurance Certificate(s)

**AGREED AND ACCEPTED**

**UNIVERSITY OF  
MASSACHUSETTS:**

**LICENSEE:**

  
\_\_\_\_\_  
Signature

Joe Shoenfeld, Associate Director  
Center for Agriculture, Food and the  
Environment  
University of Massachusetts

8/27/18  
Date

  
\_\_\_\_\_

Authorized Signature

Laurie Caldwell, Executive Director  
Boston Area Gleaners

9/5/18  
Date

## **Exhibit B     Use of Grounds and Land at UMass Waltham, 240 Beaver Street, Waltham, Mass.**

### **Specific Rules Governing Access To and Use of Facility**

The following rules apply to use of the facility. All communications related to compliance with use rules and requests for permitted variances should be directed to Facility Manager (Tony Mazzeo) at the facility.

#### **General Rules:**

**Civility and Adherence to Rules:** Licensees are responsible for actions of their staff, guests and general public invited onto premises. Licensee is responsible for ensuring compliance with all facility rules.

**Hours of Operation:** Facility is open to licensees and their guests. The building is accessible from 6 AM-11 PM. Outside grounds are accessible from 6 AM till dark.

**Parking:** Parking is generally available in lots surrounding the building. No parking is allowed on the grass without prior approval. No vehicles are to be left overnight without prior approval.

**Persons Authorized to Have Access to Facility:** Each licensee is to provide to the Facility Manager a list of persons who will have regular access to the facility. All persons having regular access to the building must be over the age of 18. For persons utilizing space within the buildings this list will specifically identify those who are to receive building keys.

**Special Events:** Special events, such as plant sales, shows, educational programs and community events, which will use additional areas of the facility are permitted, subject to the approval of the University. Use of the facility can be scheduled through the Facility Manager. Additional fees may be charged to cover related costs to the University, such as staff time, rubbish removal, etc.

### **Operational Rules for Organizations Using the Grounds and Land**

**Facility Access:** The grounds are open to licensees from 6 AM - dark. Cars are to be driven onto grass areas only to load and unload materials or for handicapped access. Parking areas for handicapped access will be identified in advance.

**Staff Services:** University staff are responsible for operation and maintenance of the facility. University staff do not provide plant production or administrative services. Each organization must provide their own labor and related services.

**Rubbish and Organic Materials Removal:** Licensee is responsible for removing rubbish and recyclable materials to dumpsters and/or receptacles for recycling. Plant waste and related organic materials are to be discarded in areas identified by the facility manager.

**Site Maintenance & Appearance:** Assigned area must appear neat, clean, and orderly throughout the year. Refuse cannot be left at the site. End of the season clean-up is required. Details for clean-up and closing of land operations will be provided.

**Water and Utilities:** Water is generally provided to each site. Water conservation must be practiced. Water leaks are to be reported to the Facility Manager. All groups using more than an acre of land and the community garden group (GROW) will provide their own water meter in order to monitor use. The University will limit water use as deemed necessary.

**Alterations and Changes in Use of the Land:** The land can only be used for the purpose stated in the application form and Agreement. Any changes in use or changes to the land or landscape must be requested in writing to the Facility Manager. This includes pruning any surrounding trees or shrubs and adding structures, fencing, trellises or related items.

**Signage:** Small descriptive signs are to be posted at the site, identifying the organization, use of the land (purpose) and contact person for further information.

**Contacts and Communications:** All issues related to building and facility use should be brought to the attention of the Facility Manager, Tony Mazzeo.

Joe Shoenfeld  
Associate Director, UMass Center for Agriculture, Food and the Environment  
July, 2018





# CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)  
05/01/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER  
Aon Risk Services Northeast, Inc.  
Providence RI Office  
100 Westminster Street, 10th Floor  
Providence RI 02903-2393 USA

CONTACT  
NAME:  
PHONE  
(A/C. No. Ext): (866) 283-7122 FAX  
(A/C. No.): (800) 363-0103  
E-MAIL  
ADDRESS:

INSURER(S) AFFORDING COVERAGE

NAIC #

INSURED  
University of Massachusetts  
333 South Street, Suite 450  
Shrewsbury MA 01545 USA

INSURER A: United Educators Ins, a Reciprocal RRG 10020  
INSURER B:  
INSURER C:  
INSURER D:  
INSURER E:  
INSURER F:

## COVERAGES

CERTIFICATE NUMBER: 570072547736

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER			U4075A SIR applies per policy terms & conditions	05/01/2018	05/01/2019	EACH OCCURRENCE \$750,000 DAMAGE TO RENTED PREMISES (Ea occurrence) Included MED EXP (Any one person) Excluded PERSONAL & ADV INJURY Included GENERAL AGGREGATE \$3,000,000 PRODUCTS - COMPIOP AGG Included SIR \$250,000
	AUTOMOBILE LIABILITY  <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
A	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$1,000,000			U4075A	05/01/2018	05/01/2019	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/>	N/A				PER STATUTE E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

## CERTIFICATE HOLDER

## CANCELLATION

Boston Area Gleaners  
Attn: Laurie Caldwell  
240 Beaver Street  
Waltham MA 02452 USA

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

*Aon Risk Services Northeast Inc.*

Holder Identifier :

Certificate No : 570072547736





The Center for  
Agriculture,  
Food and the  
Environment

UMass Extension  
Mass. Water Resources Research Center  
Mass. Agricultural Experiment Station  
UMass Research and Education Farms

Office of the Director • Stockbridge Hall • 80 Campus Center Way • Amherst, MA 01003-9246 • p: 413.545.4800 • f: 413.545.6555 • ag.umass.edu

October 15, 2018

Ms. Ailene Orlando  
c/o Green Rows of Waltham  
30 Clark Lane  
Waltham, MA 02451

Dear Ailene,

Enclosed please find a License agreement for two acres of land at Waltham for the period July 1, 2018, - December 31, 2019.

Please note that there is a copy of Exhibit B attached to this agreement. Please note that the only substantive change to this document from the past is the addition, in the fourth rule listed, of the sentence: "All persons having regular access to the building must be over the age of 18."

The fee is \$600 per acre or a portion thereof. The total is \$1,800.00 for the 18 month period.

Please sign and return one copy of the license agreement to me along with a copy of insurance certificates for liability and workman's compensation (if applicable). Sending by signed PDF is OK. An invoice will then be sent by our business office. We will invoice in three installments on July 1<sup>st</sup> and December 31<sup>st</sup>.

Please let me know if you have any questions regarding the license or invoice information.

Sincerely,

Evan Pacosa  
College of Natural Sciences  
Business Office

Joe Shoienfeld@CNS.UMASS.edu

413-545-5309

C- 413-575-5455

UMASS  
AMHERST

The Center for Agriculture, Food and the Environment and its units are equal opportunity providers and employers, United States Department of Agriculture cooperating. Contact your local Extension office for information on disability accommodations. Contact the State Center Director's Office if you have concerns related to discrimination, 413-545-4800 or see [ag.umass.edu/civil-rights-information/civil-rights-information-resources](http://ag.umass.edu/civil-rights-information/civil-rights-information-resources).



2018-2019

## **Agreement and Conditions for Use of Office Facilities at the UMass Waltham Center**

This Agreement provides conditions for use of office space at the UMass Eastern Massachusetts Outreach Center. This agreement is between Green Rows of Waltham (hereinafter Licensee), a community organization, and the University of Massachusetts (hereinafter referred to as the University).

WHEREAS, the University is the owner of certain real property located at 240 Beaver Street in Waltham and further described in Section 2 of this Agreement; and

WHEREAS, the University is responsible for the care, control and maintenance of said real property; and

WHEREAS, Licensee desires to enter upon said real property for the purposes described in this Agreement;

NOW, THEREFORE, the University hereby grants such entry and use subject to the following terms and conditions:

1. REFERENCE DATA:

Date of Agreement: July 31, 2018

Mailing Address of University:

Evan Pacosa  
318D Stockbridge Hall  
University of Massachusetts  
Amherst, MA 01003

Mailing Address of Licensee:

Ailene Orlando  
c/o Green Rows of Waltham  
30 Clark Lane  
Waltham, MA 02451

Premises: 2 acres of farm land.

Permitted Use: Use the land as a community garden for local residents, especially those who have no access to a garden.

Consideration to be Paid by Licensee: \$1,800.00 per year.

## 2. LOCATION OF THE PREMISES

Entry and use are limited to the premises located at Northwest area of field, south side of Beaver Street.

## 3. PURPOSE AND USE

The rights of Licensee under this agreement shall be exercised solely for the following purposes: Use of land for a community garden.

Specific rules governing access to and use of these facilities are attached as **Exhibit B** and are binding upon both parties.

## 4. CONDITION OF PREMISES

Licensee acknowledges and agrees that it accepts the Premises in "as is" condition, that Licensor is under no obligation to make any repairs, renovations, or alterations to the Premises, and that the University has made no representations or warranties regarding the fitness of the Premises for Licensee's intended purpose or use.

## 5. TERM

Term of Agreement: July 1, 2018 to December 31, 2019 unless otherwise terminated earlier in accordance with the terms of this Agreement.

The term of this Agreement may be extended on the following terms, subject to the prior written approval of the University: This Agreement will be reviewed annually on the anniversary date or date mutually agreeable to both parties.

This Agreement is revocable at any time upon thirty (30) days' written notice from either party to the other.

## 6. HOURS OF OPERATION

During the term of this Agreement, Licensee shall be permitted to operate and use the Premises for the purposes set forth in Section 3 and described in **Exhibit B**.

## 7. FEE

In consideration of the rights granted to Licensee under this agreement, Licensee shall pay the following Fee:

\$1,800.00

## 8. PERMITS

This agreement and all obligations hereunder are specifically dependent upon the

issuance to the Licensee of all permits and licenses required to operate and use the Premises for the purposes described in this Agreement from those governmental agencies having jurisdiction. It shall be the responsibility of Licensee to obtain any such permits or licenses, at Licensee's sole cost and expense. In the event Licensee is refused any such permit or license, this agreement shall be null and void with no further obligation by either party to perform. If any such permit or license is revoked or canceled during the term of this Agreement, it shall be cause for terminating this Agreement immediately as set forth in Section 18(c) hereof.

9. ALTERATION OF THE PREMISES

Licensee shall make no alterations or improvements upon the Premises except as may be specifically permitted in a separate Schedule attached to this License as **Exhibit C**. If no such Schedule is attached, Licensee shall not make any alterations or improvements upon the Premises after this Agreement has commenced unless Licensee has obtained the University's prior written approval, which may be withheld for any reason or for no reason in the University's sole discretion. Any alterations or improvements made by Licensee shall be made in accordance with the terms and conditions established by the University, which may include prior approval of plans, insurance coverage, and a requirement that Licensee remove any or all of its alterations or improvements upon the expiration or earlier termination of this Agreement. All such alterations or improvements remaining upon the Premises after the expiration of this License shall be subject to the provisions of Section 12 hereof. In any event, this Agreement does not for any purpose constitute the granting of an interest in real property and Licensee shall not have any right to make any permanent improvements to, or to install any permanent fixtures on, the Premises.

10. LICENSEE'S EQUIPMENT

Licensee may bring such vehicles and other equipment upon the premises as should ordinarily be used to operate and use the Premises for the purposes permitted by this Agreement, subject, however, to the following limitations outlined in **Exhibit B**.

11. UTILITIES

The University shall provide janitorial services for common areas of the buildings and general maintenance of the buildings and grounds. Heat, electric, water and sewer utilities are provided for the facilities as needed.

The University makes no representation as to the adequacy of utility systems for purposes of Licensee and shall not be responsible for any interruption in utility service.

12. CONDUCT OF LICENSEE

Non-interference with University Operations

Licensee shall at all times conduct itself so as not to interfere in any way with the operation of the University facility. Licensee agrees to observe and obey all directives given by

duly designated personnel of the University.

#### Compliance with Laws

Licensee shall at all times operate within the premises in accordance with all applicable laws, statutes, ordinances, regulations, permits, licenses, and requirements of its insurance policies.

#### Repair of Damage

Licensee shall neither cause nor suffer any waste of the premises and shall maintain the premises in good order at all times. The Licensee's responsibilities shall include, but not be limited to, the repair of any and all damage or breakage resulting from acts of vandalism or the intentional or negligent acts of the Licensee or others, but excluding damage or breakage caused by employees, agents or invitees of the University. All repairs made by Licensee shall be performed in a manner satisfactory to the University.

#### Sanitation

Licensee shall maintain the Premises in a sanitary condition and shall follow all directions of the University with regard to the collection and disposal of refuse as provided in **Exhibit B**.

#### Security

Licensee shall be responsible for providing, at its sole cost and expense, such security protection or services as may be reasonably necessary to protect the premises and Licensee's invitees from injury or damage.

#### Cost of Operations

Except as otherwise expressly set forth in this Agreement, Licensee shall be responsible for any and all costs and expenses associated with the exercise of its rights under this Agreement and its operations upon the Premises.

#### Operations Limited to Permitted Uses

Licensee shall not conduct, nor permit any of its employees, agents or invitees to conduct, any operations or business upon the Premises except for that permitted by Section 3 of this Agreement.

#### Hazardous Materials

Without limiting any of Licensee's obligations under this or any other Section of this Agreement, Licensee agrees that it shall not cause any hazardous materials to be used, generated, stored or disposed of on, under or about, or transported to or from the premises. For the purposes of this Agreement, "hazardous materials" shall include, but not be limited to substances defined as "hazardous substances", "toxic substances", "hazardous wastes", "hazardous materials", or "oil" in any federal or state statute concerning hazardous materials now or hereafter enacted, including all regulations adopted or publications promulgated thereunder.

Licensee's involved in research and plant propagation may use licensed pesticides, subject to all regulations. Plans for use and storage must be approved annually by Robert



Schrader.

### Alcoholic Beverages

Unless specifically permitted by the terms of this Agreement, Licensee shall not serve alcoholic beverages upon the Premises, nor allow any of its employees, agents, contractors or invitees to bring or consume alcoholic beverages upon the Premises.

### Surrender of Premises

Upon the expiration or earlier termination of this Agreement, Licensee shall immediately vacate and surrender the Premises to the University. However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises. Licensee shall also remove all of its property from the Premises and restore the Premises to the condition the Premises were in at the commencement of this Agreement, reasonable wear and tear excepted, and subject further to any obligation Licensee may have hereunder to make repairs or improvements to the Premises. Upon agreement of the parties, Licensee may abandon all or part of its property in place. In the event any of Licensee's personal property remains on the Premises after the expiration or earlier termination of this Agreement without a written agreement between the parties, said property shall be deemed abandoned and may be retained by University without any compensation to Licensee, or may be removed and either stored or disposed of by the University at the sole cost and expense of Licensee.

### 13. INDEMNIFICATION

Not Applicable

### 14. RISK OF LOSS

Licensee agrees that it shall use and occupy the Premises at its own risk, and the University shall not be liable to Licensee for any loss or damage to vehicles, equipment, fixtures, or other personal property of the Licensee that are brought upon the Premises. Without limiting the foregoing, the University shall have no liability to Licensee for any injury, loss or damage caused by any act of Licensee's invitees or members of the general public.

### 15. INSURANCE

The Licensee shall keep in force, at its sole cost and expense, during the full term of this License, and during such other times as Licensee occupies the Premises or any part thereof, the following insurance policies:

- A. Comprehensive public liability insurance in an amount as required by Massachusetts law.
- B. Vehicle Liability Insurance covering each vehicle of Licensee entering the Premises in an amount as required by Massachusetts law.

- C. Workers Compensation Insurance covering Licensee's employees upon the Premises in such amounts as are required by law.
- D. Such other types of insurance and in such amounts as the University may, from time to time, require in its reasonable judgment.

One or more certificates of insurance showing insurance coverage as required by this Section 15 are attached to this license as **Exhibit D**.

The insurance coverage required by this Section shall be by standard policies, obtained from financially sound and responsible insurance companies authorized to do business in Massachusetts. In the event Licensee fails to obtain any of the insurance coverage required by this section, or if any of the required insurance policies are canceled, it shall be grounds for immediate termination of this Agreement as provided in Section 18(c) of this agreement.

16. ASSIGNMENT

The Licensee shall not sell, assign, sublet, mortgage or transfer any interest in this Agreement or any part of the Premises without obtaining, in each instance, the prior written consent of the University; which consent may be withheld for any reason or for no reason, or granted upon such conditions as the University shall determine, all in its sole discretion.

17. RIGHTS OF UNIVERSITY AND AGENCY TO ENTER

The University reserves the right and the Licensee shall permit the University or its employees or agents to enter upon the Premises at any time to make repairs, perform maintenance, inspect the Premises, show the Premises to others, monitor compliance with this Agreement, or for any other reason.

18. TERMINATION

This Agreement shall expire on the date specified in Section 5, unless extended in compliance with the terms of this Agreement and all other requirements of law, or unless terminated earlier under the following conditions:

- A. Without Cause. Either Licensee or the University may terminate this Agreement by giving written notice to the other party at least thirty (30) calendar days prior to the effective date of termination stated in the notice.
- B. For Cause. If, in the opinion of University, Licensee fails to fulfill its obligations, The University may terminate this Agreement by giving written notice to the Licensee at least five (5) calendar days before the effective date of termination stated in the notice. The notice shall specify in reasonable detail the nature of Licensee's breach. The notice may also state a period during which the breach may be cured by Licensee, provided that such period shall expire on or before the termination date stated in the notice. In the event the Licensee is given an opportunity to cure its breach (which shall be within the sole discretion of the University) and Licensee fails

to complete such cure to the satisfaction of the University within the cure period, this Agreement shall come to an end on the termination date stated in the notice.

C. Emergency. In the event the University determines that it is necessary to terminate this Agreement or suspend Licensee's rights hereunder immediately in order to prevent injury or damage to persons or property, including the interest of the University in the Premises, the University may terminate this Agreement or suspend Licensee's rights hereunder by providing written notice to Licensee stating the grounds for said termination or suspension. Said notice may be given in the form of a telegram, mailgram, hand-carried letter, or other reasonable written means, and this License shall be terminated or suspended, as the case may be, upon delivery of said notice to Licensee.

In the event this Agreement is terminated in accordance with any of the provisions of this Section 18, this Agreement shall come to an end as fully and completely as if the term had expired on the date set forth in Section 5, and Licensee shall vacate and surrender the Premises as provided in Section 12.

In the event this Agreement is terminated by the University in accordance with any of the provisions of this Section 18, Licensee shall not be relieved of liability to the University for arrears in the License fees or for any other injury or damage sustained by the University as a result of a breach of Licensee of any of the terms or conditions of this Agreement, whether occurring before or after such termination. Licensee expressly waives any right to damages related to such termination, including incidental or consequential damages. If this Agreement is terminated for any reason that is not the fault of Licensee, then the fee which the Licensee has covenanted to pay, if any, shall be commensurately reduced by the University on a pro rata per diem basis, and Licensee shall receive a refund of any portion of the Agreement Fee that has been prepaid for a period during which the Licensee was denied use and occupancy of the Premises.

#### 19. NO ESTATE CREATED

This Agreement shall not be construed as creating or vesting in Licensee any estate in the Premises, but only the limited right of possession as herein described, and Licensee shall have no right to require specific performance of the obligation of the University hereunder.

#### 20. NON-DISCRIMINATION

Licensee shall not discriminate against any qualified employee, applicant for employment, subcontractor, or person or firm seeking to provide goods or services to Licensee, nor shall Licensee deny any person access to the Premises or to any activities or programs carried out pursuant to this Agreement because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation. The Licensee shall comply with all applicable federal and state statutes, rules, and regulations prohibiting discrimination in employment.

#### 21. NOTICE

All notices or other communications required or permitted to be given under this Agreement shall, unless otherwise expressly permitted hereunder, be in writing signed by a duly authorized representative of the party giving the notice and shall be given by hand delivery (including, without limitation, courier, Federal Express, or other overnight delivery service) or mailed by United States certified mail, postage prepaid, return receipt requested. Such notices shall be sent or addressed to the University and Licensee at the addresses set forth in Section 1.

## 22. MISCELLANEOUS PROVISIONS

This Agreement may not be modified except in writing, duly executed by both parties.

This Agreement contains the entire agreement of the parties and there are no other agreements or understandings between the parties regarding the subject matter of this Agreement.

The University, its employees, officers or agents, are not authorized to bind or involve the Licensee or the Commonwealth of Massachusetts in any contract or to incur any liability for or on the part of the Licensee or the Commonwealth of Massachusetts.

If any portion of this Agreement is declared to be illegal, unenforceable or void, then all parties to this Agreement shall be relieved of all obligations under that portion; provided, however, that the remainder of this agreement shall be enforced to the fullest extent permitted by law.

No consent or waiver, whether express or implied, by the University to or of any breach of the terms of this Agreement by Licensee shall be construed as a consent or waiver to or of any other breach. No waiver of any breach or default or other indulgence shall be effective unless expressed in writing by the University.

The captions in this Agreement are inserted for convenience of reference only and in no way define, describe or limit the scope or intent of this Agreement or any of the provisions hereof.

No official, employee or consultant of the Commonwealth of Massachusetts (including any Trustee of the University of Massachusetts) shall be personally liable to Licensee or to any person claiming under or through Licensee for or on account of any alleged breach of this Agreement, or for any act, failure to act or other matter arising out of the execution of this Agreement or the performance of Licensee's obligations hereunder.

This Agreement shall be governed by, and construed in accordance with the laws of the Commonwealth of Massachusetts, and any and all legal actions brought in connection with this Agreement shall be brought in courts within the Commonwealth of Massachusetts.

No provision of this Agreement shall be deemed to have been waived by either party unless such waiver is in writing and is signed by the party to be charged.

This Agreement is to take effect as a sealed instrument.


The following exhibits and attachments are made a part of this Agreement for all purposes:

- ☐ Exhibit A - Plan or Diagram of Premises to be Utilized by Licensee
- ☒ Exhibit B - Specific Rules Governing Access and Use of Facility
- ☐ Exhibit C - Schedule of Permitted Alterations and Improvements
- ☒ Exhibit D - Insurance Certificate(s)

**AGREED AND ACCEPTED**

**UNIVERSITY OF  
MASSACHUSETTS:**

**LICENSEE:**

  
\_\_\_\_\_  
Signature

Joe Shoenfeld, Associate Director  
Center for Agriculture, Food and the  
Environment  
University of Massachusetts

10/15/18  
Date

  
\_\_\_\_\_  
Authorized Signature

Ailene Orlando  
Green Rows of Waltham - *Treasurer*

10/25/18  
Date



## **Exhibit B     Use of Grounds and Land at UMass Waltham, 240 Beaver Street, Waltham, Mass.**

### **Specific Rules Governing Access To and Use of Facility**

The following rules apply to use of the facility. All communications related to compliance with use rules and requests for permitted variances should be directed to Facility Manager (Tony Mazzeo) at the facility.

#### **General Rules:**

**Civility and Adherence to Rules:** Licensees are responsible for actions of their staff, guests and general public invited onto premises. Licensee is responsible for ensuring compliance with all facility rules.

**Hours of Operation:** Facility is open to licensees and their guests. The building is accessible from 6 AM-11 PM. Outside grounds are accessible from 6 AM till dark.

**Parking:** Parking is generally available in lots surrounding the building. No parking is allowed on the grass without prior approval. No vehicles are to be left overnight without prior approval.

**Persons Authorized to Have Access to Facility:** Each licensee is to provide to the Facility Manager a list of persons who will have regular access to the facility. All persons having regular access to the building must be over the age of 18. For persons utilizing space within the buildings this list will specifically identify those who are to receive building keys.

**Special Events:** Special events, such as plant sales, shows, educational programs and community events, which will use additional areas of the facility are permitted, subject to the approval of the University. Use of the facility can be scheduled through the Facility Manager. Additional fees may be charged to cover related costs to the University, such as staff time, rubbish removal, etc.

### **Operational Rules for Organizations Using the Grounds and Land**

**Facility Access:** The grounds are open to licensees from 6 AM - dark. Cars are to be driven onto grass areas only to load and unload materials or for handicapped access. Parking areas for handicapped access will be identified in advance.

**Staff Services:** University staff are responsible for operation and maintenance of the facility. University staff do not provide plant production or administrative services. Each organization must provide their own labor and related services.

**Rubbish and Organic Materials Removal:** Licensee is responsible for removing rubbish and recyclable materials to dumpsters and/or receptacles for recycling. Plant waste and related organic materials are to be discarded in areas identified by the facility manager.

**Site Maintenance & Appearance:** Assigned area must appear neat, clean, and orderly throughout the year. Refuse cannot be left at the site. End of the season clean-up is required. Details for clean-up and closing of land operations will be provided.

**Water and Utilities:** Water is generally provided to each site. Water conservation must be practiced. Water leaks are to be reported to the Facility Manager. All groups using more than an acre of land and the community garden group (GROW) will provide their own water meter in order to monitor use. The University will limit water use as deemed necessary.

**Alterations and Changes in Use of the Land:** The land can only be used for the purpose stated in the application form and Agreement. Any changes in use or changes to the land or landscape must be requested in writing to the Facility Manager. This includes pruning any surrounding trees or shrubs and adding structures, fencing, trellises or related items.

**Signage:** Small descriptive signs are to be posted at the site, identifying the organization, use of the land (purpose) and contact person for further information.

**Contacts and Communications:** All issues related to building and facility use should be brought to the attention of the Facility Manager, Tony Mazzeo.

Joe Shoenfeld  
Associate Director, UMass Center for Agriculture, Food and the Environment  
July, 2018





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY)  
06/25/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICY BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> BIKOFSKY INSURANCE AGENCY INC 793 WASHINGTON ST NEWTONVILLE, MA 02460 (888) 661-3938	<b>CONTACT NAME:</b> <b>PHONE</b> (A/C, No, Ext): (888) 661-3938 <b>FAX</b> (A/C, No): (877) 872-7604 <b>E-MAIL</b> ADDRESS: service.center@travelers.com
<b>INSURER(S) AFFORDING COVERAGE</b>	
INSURER A: THE TRAVELERS INDEMNITY COMPANY OF CONNECTICUT	
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	
INSURER F:	

**INSURED**  
GROW-GREEN ROWS OF WALTHAM  
C/O AILENE ORLANDO  
30 CLARK LANE  
WALTHAM, MA 02451

**COVERAGES****CERTIFICATE NUMBER:** 123639519402671**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:	X		660-779X2799-19	08/02/2019	08/02/2020	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000 MED EXP (Any one person) \$5,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000
	<b>AUTOMOBILE LIABILITY</b>  <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	<input type="checkbox"/> <b>UMBRELLA LIAB</b> <input type="checkbox"/> <b>EXCESS LIAB</b> <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N/A				PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

AS RESPECTS TO GENERAL LIABILITY, CERTIFICATE HOLDER IS ADDITIONAL INSURED - MANAGERS OR LESSORS OF PREMISES, CG 20 11, FOR THE FOLLOWING LOCATION: BEAVER STREET, WALTHAM, MA 02451

**CERTIFICATE HOLDER**UMASS EXTENSION, UNIVERSITY OF  
MASSACHUSETTS  
101 UNIVERSITY DRIVE  
AMHERST, MA 01003**CANCELLATION**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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## FIRST EXTENSION OF LICENSE AGREEMENT

This First Extension of License Agreement ("First Extension") is made on April 30, 2020 by and between the University of Massachusetts Amherst ("University") and Green Rows of Waltham ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. Section 1 (Reference Data) of the Agreement shall be modified by deleting the Mailing Address of the University currently listed and replacing same with: *"Steven Goodwin, Whitmore Administration Building Room 347, 181 Presidents Drive, Amherst, MA 01003"*.
2. TERM: The term of the Agreement shall be extended through December 31, 2020.
3. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of One Thousand Two Hundred and 00/100 Dollars (\$1,200.00), payable in advance in monthly installments of One Hundred Dollars (\$100.00) per month.
4. Section 12 (Surrender of Premises) is hereby amended by deleting the following language in its entirety: *"However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises."*
5. Section 12 (Hazardous Materials) is hereby amended to replace *"Robert Schrader"* with *"the University's Environmental Health & Safety Office"*.
6. Section 15 (Insurance) is hereby amended to add the following to the end of the section: *"All certificates of insurance from Licensee shall list the University as an additional insured."*

7. Section 22 (Miscellaneous Provisions) is hereby amended by placing an "X" next to Exhibit A to indicate inclusion of same. Exhibit A showing land licensed is hereby attached and incorporated herein by reference.
8. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

[SIGNATURE PAGE TO FOLLOW]

**SECOND EXTENSION OF LICENSE AGREEMENT**

This Second Extension of License Agreement ("Second Extension") is made on December 15, 2020 by and between the University of Massachusetts Amherst ("University") and Green Rows of Waltham ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. **TERM:** The term of the Agreement shall be extended on a month-to-month basis, terminable by Licensor or Licensee upon thirty (30) days' prior written notice to the other party.
2. **FEE:** In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of One Hundred Dollars (\$100.00) per month.
3. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

**[SIGNATURE PAGE TO FOLLOW]**

IN WITNESS WHEREOF, the parties hereto have executed this Second Extension as of the date first written above.

UNIVERSITY:

UNIVERSITY OF MASSACHUSETTS

DocuSigned by:

By:

*Andrew P. Mangels*

Name: Andrew P. Mangels

Title: Vice Chancellor for Administration and Finance

LICENSEE:

GREEN ROWS OF WALTHAM

By:

*Aileen Orlando*

Name: Aileen Orlando

Title: Treasurer

AUDITING DEPARTMENT INFORMATION  
REGARDING CORNELIA WARREN FARM AND FIELD HOUSE  
240 BEAVER STREET

## City of Waltham

## 240 Beaver Street - Water Bills

<u>Paid Date</u>	<u>Acct #</u>	<u>UMass Paid Amount</u>	<u>City Paid Amount</u>
3/24/2021	1008001	177.38	
6/22/2021	1008001	102.38	
9/14/2021	1008001	252.38	
1/6/2022	1008001	182.84	
3/8/2022	1008001	102.38	
6/3/2022	1008001		\$252.38
9/2/2022	1008001		\$102.38
12/1/2022	1008001		\$102.38
<b>Total</b>	<b>1008001</b>	<b>\$817.36</b>	<b>\$457.14</b>

2/5/2021	1009001	73.34	
3/3/2021	1009001	36.67	
11/16/2021	1009001	2006.18	
5/20/2022	1009001		\$416.52
06/28/2022	1009001		\$101.24
8/12/2022	1009001		\$220.94
8/26/2022	1009001		\$256.50
9/23/2022	1009001		\$398.74
10/28/2022	1009001		\$247.61
11/18/2022	1009001		\$389.85
<b>Total</b>	<b>1009001</b>	<b>\$2,116.19</b>	<b>\$2,031.40</b>

2/5/2021	1010001	\$708.69	
3/10/2021	1010001	\$879.41	
4/6/2021	1010001	\$1,317.41	
5/4/2021	1010001	\$748.01	
5/25/2021	1010001	\$531.75	
8/3/2021	1010001	\$153.55	
8/11/2021	1010001	\$335.15	
8/31/2021	1010001	\$136.39	
12/6/2021	1010001	\$234.26	
12/14/2021	1010001	\$256.51	
1/6/2022	1010001	\$472.77	
2/23/2022	1010001	\$603.11	
3/8/2022	1010001	\$975.18	
???	1010001		\$577.45
???	1010001		\$859.71
???	1010001		\$1,591.12
5/20/2022	1010001		\$2,142.91
6/28/2022	1010001		\$423.49
8/12/2022	1010001		\$300.19
8/26/2022	1010001		\$207.55
9/23/2022	1010001		\$253.87
10/28/2022	1010001		\$230.71
11/18/2022	1010001		\$474.81
<b>Total</b>	<b>1010001</b>	<b>\$7,352.19</b>	<b>\$7,061.81</b>

5/20/2022	1011001		\$110.00
6/28/2022	1011001		\$2,114.51
8/12/2022	1011001		\$3,528.02
8/12/2022	1011001		\$10,151.07
9/23/2022	1011001		\$18,552.12
10/28/2022	1011001		\$5,528.27
11/18/2022	1011001		\$923.25
<b>Total</b>	<b>1011001</b>	<b>\$0.00</b>	<b>\$40,907.24</b>

<b>Grand Total</b>		<b>\$10,285.74</b>	<b>\$50,457.59</b>
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## Billing Information

**DIVISION**  
**REVENUE**  
**(781) 314-3810**

RECEIVED  
JAN 10 1960

Mon - Fri.

[illegible]

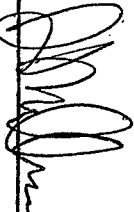
ON OR  
BEFORE  
11/30/22  
\$923.25

RECEIVED  
NOV - 8 1967  
BY: P. Lucas  
P. Lucas

IRANS ACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$5,528.27
PAYMENTS THROUGH 11/01/2022	-5,528.27
ADJUSTMENTS THROUGH 11/01/2022	\$0.00
BALANCE FORWARD	\$0.00

Current Bill Detail  
Monthly Water Usage

Usage/Unit	AMOUNT
11,900	\$923.25
Sub-Total	\$923.25
Total	\$923.25

APPROVED BY: 

ACCT # 001-193-5200-5231-00-93

\*\*\*\*\*PLEASE NOTE\*\*\*\*\*  
ANY ACCOUNT WITH A BALANCE THAT WAS BILLED PRIOR TO SEPTEMBER 1, 2022 THAT IS  
STILL OUTSTANDING AS OF THE LIEN DATE OF NOVEMBER 15, 2022, WILL BE ADDED TO THE FY2023 TAX BILL PER GENERAL LAW



# CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing Information

(781)314-3810

OFFICE HOURS

Mon - Fri.

8:30am - 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

001 16 2022

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

RECEIVED  
001 13 2022  
BY: Pyons

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

ACCOUNT NO.	BILLING DATE
1011001	10/3/2022
DUE DATE	10/31/22
SERVICE ADDRESS	240 BEAVER ST

ON OR BEFORE	10/31/22	\$5,528.27
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TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$18,552.12
PAYMENTS THROUGH 10/03/2022	-\$18,552.12
ADJUSTMENTS THROUGH 10/03/2022	\$0.00
BALANCE FORWARD	\$0.00

Serial No	Reading & Date	Usage	#Days
1-0-10894	Current		
1-0-10894	6,338 Actual	09/26/2022	334
1-0-10895	7,755 Actual	09/26/2022	303
1-0-10895			31
Reading History			
1-0-10895	7,755 Actual	09/26/2022	303
1-0-10894	6,338 Actual	09/26/2022	31
1-0-10895	7,452 Actual	08/26/2022	334
1-0-10894	6,004 Actual	08/26/2022	857
1-0-10895	6,595 Actual	07/25/2022	1,245
1-0-10894	4,759 Actual	07/25/2022	542
1-0-10895	6,053 Actual	06/27/2022	615
1-0-10894	4,144 Actual	06/27/2022	204
1-0-10895	5,849 Actual	05/28/2022	208
1-0-10894	3,936 Actual	05/28/2022	113
1-0-10894			33

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	63,700	\$5,528.27
Sub-Total		\$5,528.27
Total		\$5,528.27

APPROVED BY:

ACT. # 001-193-5200-5231 - 00-93

\*\*\*\*\*PLEASE NOTE\*\*\*\*\* ANY ACCOUNT WITH A BALANCE THAT WAS BILLED PRIOR TO SEPTEMBER 1, 2022 THAT IS STILL OUTSTANDING AS OF THE LIEN DATE OF NOVEMBER 15, 2022, WILL BE ADDED TO THE FY2023 TAX BILL PER GENERAL LAW



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION  
POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781) 314-3810

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

RECEIVED  
SEP 13 2022  
BY: P. Lyons

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

TRANSACTION THIS PERIOD		AMOUNT
PREVIOUS BALANCE		\$13,679.09
PAYMENTS THROUGH 09/01/2022		-\$13,679.09
ADJUSTMENTS THROUGH 09/01/2022		\$0.00
BALANCE FORWARD		\$0.00

PAID ON OR BEFORE	09/30/22	\$18,552.12
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ACCOUNT NO.	BILLING DATE
1011001	9/1/2022
DUE DATE	
09/30/22	
SERVICE ADDRESS	
240 BEAVER ST	

Serial No	Reading & Date	Usage	#Days
1-0-10894	Current		
1-0-10894	6,004 Actual	1245	32
1-0-10895	7,452 Actual	857	32
Reading History			
1-0-10895	7,452 Actual	857	32
1-0-10894	6,004 Actual	1,245	32
1-0-10895	6,595 Actual	542	28
1-0-10894	4,759 Actual	615	28
1-0-10895	6,053 Actual	204	30
1-0-10894	4,144 Actual	208	30
1-0-10895	5,849 Actual	113	33
1-0-10894	3,936 Actual	140	33
1-0-10895	5,736 Actual	1	180
1-0-10894	3,796 Actual	1	180

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	210,200	\$18,552.12
Sub-Total		\$18,552.12
Total		\$18,552.12

APPROVED BY:

ACCT.# 001-193-5200-5231 - 00 - 93

\*\*\*\*\*PLEASE NOTE\*\*\*\*\* ANY ACCOUNT WITH A BALANCE THAT WAS BILLED PRIOR TO SEPTEMBER 1, 2022 THAT IS STILL OUTSTANDING AS OF THE LIEN DATE OF NOVEMBER 15, 2022, WILL BE ADDED TO THE FY2023 TAX BILL PER GENERAL LAW



# CITY OF WALTHAM

WATER AND SEWER DIVISION

Billing Information  
(781)314-3810

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

AUG 17 2022

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

AUG 16 2022

WALTHAM PURCHASING  
DEPARTMENT  
P-24005

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date	Usage	#Days
1-0-10894	Current 4,759 Actual	615	28
1-0-10895	6,595 Actual	542	28
Reading History			
1-0-10895	6,595 Actual	542	28
1-0-10894	4,759 Actual	615	28
1-0-10895	6,053 Actual	204	30
1-0-10894	4,144 Actual	208	30
1-0-10895	5,849 Actual	113	33
1-0-10894	3,936 Actual	140	33
1-0-10895	5,736 Actual	1	180
1-0-10894	3,796 Actual	546	343
1-0-10895	5,735 Historic	405	343
1-0-10894	3,795 Historic		

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$3,528.02
PAYMENTS THROUGH 08/01/2022	\$0.00
ADJUSTMENTS THROUGH 08/01/2022	\$0.00
BALANCE FORWARD	\$3,528.02

ON OR BEFORE	08/31/22	\$13,679.09
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ACCOUNT NO.	BILLING DATE
1011001	8/1/2022
DUE DATE	08/31/22
SERVICE ADDRESS	240 BEAVER ST

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	115,700	\$10,151.07
Sub-Total		\$10,151.07
Total		\$13,679.09

APPROVED BY:   
ACT. # 001-193-5200-5231-00-93

On-line Bill Pay is available through the City of Waltham Website. Click the link and follow the prompts:  
<http://www.city.waltham.ma.us/treasurer-collector-department/pages/online-payment>



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION  
POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

BY: *P. Lyons*

ON OR BEFORE	07/29/22	\$5,642.53
--------------	----------	------------

TRANSACTION THIS PERIOD

PREVIOUS BALANCE	\$2,114.51
PAYMENTS THROUGH 07/01/2022	\$0.00
ADJUSTMENTS THROUGH 07/01/2022	\$0.00
BALANCE FORWARD	\$2,114.51

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date	Usage	#Days
1-0-10894	Current 4,144 Actual	208	30
1-0-10895	6,053 Actual	204	30
Reading History			
1-0-10895	6,053 Actual	204	30
1-0-10894	4,144 Actual	208	30
1-0-10895	5,849 Actual	113	33
1-0-10894	3,936 Actual	140	33
1-0-10895	5,736 Actual	1	180
1-0-10894	3,796 Actual	1	180
1-0-10895	5,735 Historic	546	343
1-0-10894	3,795 Historic	405	343

APPROVED BY: *[Signature]*

ACCT. # 001-193-5200-5231 - 00 - 93

Total \$5,642.53

On-line Bill Pay is available through the City of Waltham Website. Click the link and follow the prompts:  
<http://www.city.waltham.ma.us/treasurer-collector-department/pages/online-payment>



**CITY OF WALTHAM**  
**WATER AND SEWER DIVISION**

Billing Information  
**(781)314-3810**

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

OFFICE HOURS  
Mon - Fri.

**RETAIN THIS PORTION FOR YOUR RECORDS**  
**JUN 30 2022**  
8:29am to 4:30pm

ACCOUNT NO.	BILLING DATE
1011001	6/1/2022
DUE DATE	
06/30/22	
SERVICE ADDRESS	
240 BEAVER ST	

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

BY: P. Lyons

**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$110.00
PAYMENTS THROUGH 06/01/2022	-\$110.00
ADJUSTMENTS THROUGH 06/01/2022	\$0.00
BALANCE FORWARD	\$0.00

ON OR BEFORE	06/30/22	\$2,114.51
--------------	----------	------------

Serial No	Reading & Date	Usage	#Days
1-0-10894	Current 3,936 Actual	05/28/2022	140
1-0-10895	5,849 Actual	05/28/2022	113
			33

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	25,300	\$2,114.51
Sub-Total		\$2,114.51
Total		\$2,114.51

Reading History			
1-0-10895	5,849 Actual	05/28/2022	113
1-0-10894	3,936 Actual	05/28/2022	140
1-0-10895	5,736 Actual	04/25/2022	1
1-0-10894	3,796 Actual	04/25/2022	1
1-0-10895	5,735 Historic	10/27/2021	546
1-0-10894	3,795 Historic	10/27/2021	405

APPROVED BY: *[Signature]*

ACT# 001-193-5200-5231-00-93

On-line Bill Pay is available through the City of Waltham Website. Click the link and follow the prompts:  
<http://www.city.waltham.ma.us/treasurer-collector-department/pages/online-payment>



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION  
POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
**(781)314-3810**  
OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

MAY 11 2022

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date	Usage	# Days
1-0-10894	Current		
1-0-10894	3,796 Actual	1	180
1-0-10895	5,736 Actual	1	180
1-0-10895	Reading History		
1-0-10895	5,736 Actual	1	180
1-0-10894	3,796 Actual	1	180
1-0-10895	5,735 Historic	546	343
1-0-10894	3,795 Historic	405	343

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$0.00
PAYMENTS THROUGH 05/02/2022	\$0.00
ADJUSTMENTS THROUGH 05/02/2022	\$0.00
BALANCE FORWARD	\$0.00

ON OR BEFORE	05/31/22	\$110.00
--------------	----------	----------

ACCOUNT NO.	BILLING DATE
1011001	5/2/2022
DUE DATE	05/31/22
SERVICE ADDRESS	240 BEAVER ST

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	200	\$110.00
Sub-Total		\$110.00
Total		\$110.00

APPROVED BY:   
ACT# 001-193-5200-5231 - 00-93

On-line Bill Pay is available through the City of Waltham Website. Click the link and follow the prompts:  
<http://www.city.waltham.ma.us/treasurer-collector-department/pages/online-payment>

**BUILDING DEPARTMENT INFORMATION  
REGARDING CORNELIA WARREN FARM AND FIELD HOUSE  
240 BEAVER STREET**



**STREET:** 240 Beaver Street

**LOT NO:**

[illegible]



City of Waltham Application for Permit 119  
School Street  
Waltham, MA 02451  
Telephone 781-314-3275

DATE RECEIVED

MAY 18 2022

Received By: Jim

APPLICATION TO CONSTRUCT, REPAIR, RENOVATE, CHANGE THE USE OR DEMOLISH A ONE OR TWO FAMILY DWELLING

This Section For Official Use Only

Building Permit Number

Date Issued:

Signature:

Building Commissioner/Inspector of Buildings

Date

SECTION 1 - SITE INFORMATION

1.1 Property Address

240 BEAVER ST  
WALTHAM, MA

1.2 Assessors Map & Parcel Number:

Map Number

Parcel Number

1.3 Zoning Information:

Zoning District

Proposed Use

1.4 Property Dimensions:

Lot Area (sq)

Frontage (ft)

1.6 Building Setbacks (ft)

Front Yard

Side Yard

Rear Yard

Required

Proposed

Required

Proposed

Required

Proposed

1.7 Water Supply (M.G.L. c. 40, § 54)

Public ☐

Private ☐

1.5 Flood Zone Information:

Zone:

Outside Flood Zone ☐

1.8 Sewage Disposal System:

Municipal ☐

On site disposal system ☐

SECTION 2 - PROPERTY OWNERSHIP/AUTHORIZED

2.1 Owner of Record:

Name (Print)

GROW NATIVE MASS 240 BEAVER ST.

Address for Service

Signature

Heather Priksma

Telephone

2.2 Authorized Agent

Name (Print)

Address

Signature

Telephone

SECTION 3 - CONSTRUCTION SERVICES

3.1 Licensed Construction Supervisor:

ATLANTIC Tent Rental, INC.

Licensed Construction Supervisor:

BARRY PERLA

Address

12 middle st. phemister

Signature

Barry Perla

Telephone 978-534-2322

Not Applicable ☐

License Number

Expiration Date

3.2 Registered Home Improvement Contractor:

Company Name

Address

Signature

Telephone

Not Applicable ☐

Registration Number

Expiration Date

**SECTION 4 – WORKERS' COMPENSATION INSURANCE AFFIDAVIT (M.G.L. c. 152 § 25C(6))**

Workers Compensation Insurance affidavit must be completed and submitted with this application. Failure to provide this affidavit will result in the denial of the issuance of the building permit.

Signed Affidavit Attached Yes...☒ No...☐

**SECTION 5 – DESCRIPTION OF PROPOSED WORK (check all applicable)**

New Construction <input type="checkbox"/>	Existing Building <input type="checkbox"/>	Repair(s) <input type="checkbox"/>	Alteration(s) <input type="checkbox"/>	Addition <input type="checkbox"/>
Accessory Bldg. <input type="checkbox"/>	Demolition <input type="checkbox"/>	Other: <input checked="" type="checkbox"/> Specify: <i>temporary tent</i>		

Brief Description of Proposed Work:

*Plant sale under tent*  
*#4 20x30*

**SECTION 6 – ESTIMATED CONSTRUCTION COSTS**

Item	Estimated Costs (Dollars) to be Completed by permit applicant	Official Use Only	
1. Building	<i>\$1,200.00</i>	(a) Building Permit Fee Multiplier \$12.00/\$1,000.00	
2. Electrical		(b) Estimated Total Cost of Construction from (6)	
3. Plumbing		Building Permit Fee* (a) x (b)	<i>26.40</i>
4. Mechanical (HVAC)			
5. Fire Protection			
6. Total = (1+2+3+4+5)	<i>\$1,200.00</i>	Check Number	

**SECTION 7a – OWNER AUTHORIZATION – TO BE COMPLETED WHEN OWNERS AGENT OR CONTRACTOR APPLIES FOR BUILDING PERMIT**

I, \_\_\_\_\_, as Owner of the subject property hereby authorize \_\_\_\_\_ to act on my behalf, in all matters relative to work authorized by this building permit application.

Signature of Owner

Date

**SECTION 7b – OWNER/AUTHORIZED AGENT DECLARATION**

I, *Barry Perla*, as Owner/Authorized Agent  
Hereby declare that the statements and information on the foregoing application are true and accurate, to the best of my knowledge and belief.  
Signed under the pains and penalties of perjury.

Print Name

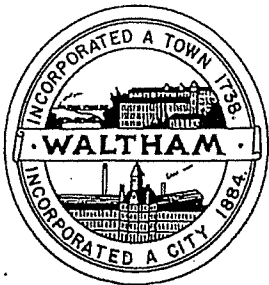
Signature of Owner/Agent

Date

*Barry Perla*

*Barry Perla*

*5/18/22*



# City of Waltham

Massachusetts

Building Department

Office of Building Commissioner  
Superintendent of Buildings

In accordance with the provisions of MGL c40.S 564 a condition of Building Permit Number \_\_\_\_\_ is that the debris resulting from this work shall be disposed of in a properly licensed solid waste disposal facility as defined by MGL c111.S 150A.

The debris will be disposed of in

\_\_\_\_\_  
Location of Facility

\_\_\_\_\_  
Signature of Permit Applicant

\_\_\_\_\_  
Date

# Certificate of Flame Resistance

REGISTERED  
APPLICATION  
CONCERN NO.

CAL GOMB F-419.01

AZTEC TENTS  
490 ALASKA AVENUE  
TORRANCE, CA 90503  
(800)228-3687

Date treated or  
manufactured

08/28/2013

This is to certify that the materials described below hereof have been flame retardant treated (or are inherently nonflammable).

FOR Atlantic Tent Rental

12 Middle St.

Leominster, MA 01453



**Certification is hereby made that: (check "a" or "b")**



- (a) The articles described below this certificate have been treated with a flame retardant chemical approved and registered by the State Fire Marshal and that the application of said chemical was done in conformance with the laws of the State of California and the Rules and Regulations of the State Fire Marshal.

Name of chemical used \_\_\_\_\_ Chem. Reg. No. \_\_\_\_\_

Method of application \_\_\_\_\_



- (b) The articles described below hereof are made from a flame -resistant fabric or material registered and approved by the State Fire Marshal for such use; Fabric has been tested and passes NFPA701-96.

Trade name of flame-resistant fabric or material used Laminated Fabric Reg. No. F-419.01

The Flame Retardant Process Used WILL NOT Be Removed by Washing  
(will or will not)

David Bradley

Name of Applicator or Production Superintendent

Chuck Miller - President

Title

CUSTOMER ORDER NO.

ITEMS MANUFACTURED:

20 X 30



The Commonwealth of Massachusetts  
Department of Industrial Accidents  
1 Congress Street, Suite 100  
Boston, MA 02114-2017

www.mass.gov/dia

Workers' Compensation Insurance Affidavit: Builders/Contractors/Electricians/Plumbers  
TO BE FILED WITH THE PERMITTING AUTHORITY.

**Applicant Information**

Please Print Legibly

Name (Business/Organization/Individual): ATLANTIC TENT RENTAL, INC

Address: 12 middle st.

City/State/Zip: Leominster, MA Phone #: 978-534-2322

Are you an employer? Check the appropriate box:

1. ☒ I am an employer with 6 employees (full and/or part-time).\*
2. ☐ I am a sole proprietor or partnership and have no employees working for me in any capacity. [No workers' comp. insurance required.]
3. ☐ I am a homeowner doing all work myself. [No workers' comp. insurance required.] †
4. ☐ I am a homeowner and will be hiring contractors to conduct all work on my property. I will ensure that all contractors either have workers' compensation insurance or are sole proprietors with no employees.
5. ☐ I am a general contractor and I have hired the sub-contractors listed on the attached sheet. These sub-contractors have employees and have workers' comp. insurance. ‡
6. ☐ We are a corporation and its officers have exercised their right of exemption per MGL c. 152, §1(4), and we have no employees. [No workers' comp. insurance required.]

Type of project (required):

7. ☐ New construction
8. ☐ Remodeling
9. ☐ Demolition
10. ☐ Building addition
11. ☐ Electrical repair or additions
12. ☐ Plumbing repair or additions
13. ☐ Roof repairs
14. ☒ Other TEMPORARY TENT

\*Any applicant that checks box #1 must also fill out the section below showing their workers' compensation policy information.

† Homeowners who submit this affidavit indicating they are doing all work and then hire outside contractors must submit a new affidavit indicating such.

‡ Contractors that check this box must attach an additional sheet showing the name of the sub-contractors and state whether or not those contractors have employees. If the sub-contractors have employees, they must provide their workers' comp. policy number.

**I am an employer that is providing workers' compensation insurance for my employees. Below is the policy and job site information.**

Insurance Company Name: WESCO INS CO

Policy # or Self-ins. Lic. #: UMC 3584279 Expiration Date: 5/20/23

Job Site Address: 240 BEAVER ST City/State/Zip: Waltham, MA

Attach a copy of the workers' compensation policy declaration page (showing the policy number and expiration date).

Failure to secure coverage as required under MGL c. 152, §25A is a criminal violation punishable by a fine up to \$500.00 and/or one-year imprisonment, as well as civil penalties in the form of a STOP WORK ORDER and a fine of up to \$250.00 a day against the violator. A copy of this statement may be forwarded to the Office of Investigations of the DIA Insurance coverage verification.

**I do hereby certify under the pains and penalties of perjury that the information provided above is true and correct.**

Signature: Benny Park Date: 5/18/23

Phone #: 978-534-2322

**Official use only. Do not write in this area, to be completed by city or town official.**

City or Town: \_\_\_\_\_ Permit/License # \_\_\_\_\_

Issuing Authority (circle one):

1. Board of Health 2. Building Department 3. City/Town Clerk 4. Electrical Inspector 5. Plumbing Inspector  
6. Other \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone #: \_\_\_\_\_

**TENT PLAN REVIEWED**  
 With Corrections Made on Field Subject to Field Inspection  
 With Corrections Made on Field Subject to Field Inspection  
**NO DETAIL REQUIRED**  
*[Signature]* *5/16/22*  
 Waltham Fire Department DATE  
 Fire Prevention Bureau



there ARE no sidewalks  
 so they CAN exit anywhere  
 under Tent

Helene Sroat  
 Office Manager  
 Grow Native Massachusetts

Every garden matters ~ Every landscape counts

Monday, May 16, 2022 10:15:53 AM - Site map - Message (HTML)

# Certificate of Flame Resistance

REGISTERED  
APPLICATION  
CONCERN NO.

CAL GOMB F-419.01

AZTEC TENTS  
498 ALASKA AVENUE  
TORRANCE, CA 90503  
(800)228-3687

Date treated or  
manufactured

08/28/2013

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FOR Atlantic Tent Rental

12 Middle St.

Leominster, MA 01453



**Certification is hereby made that: (check "a" or "b")**



- (a) The articles described below this certificate have been treated with a flame retardant chemical approved and registered by the State Fire Marshal and that the application of said chemical was done in conformance with the laws of the State of California and the Rules and Regulations of the State Fire Marshal.

Name of chemical used \_\_\_\_\_ Chem. Reg. No. \_\_\_\_\_

Method of application \_\_\_\_\_



- (b) The articles described below hereof are made from a flame-resistant fabric or material registered and approved by the State Fire Marshal for such use; Fabric has been tested and passes NFPA701-96.

Trade name of flame-resistant fabric or material used Laminated Fabric Reg. No. F-419.01

The Flame Retardant Process Used WILL NOT Be Removed by Washing  
(will or will not)

David Bradley

Name of Applicator or Production Superintendent

Chuck Miller - President

Title

CUSTOMER ORDER NO.

ITEMS MANUFACTURED:

20 X 30





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
04/29/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER CA LIC 0B29370 1-925-798-3334

Edgewood Partners Insurance Center (EPIC)

[Concord Programs Group - Branch 15558]

P.O. Box 5668

Concord, CA 94524

INSURED

Atlantic Tent Rental Co.

12 Middle St.

Leominster, MA 01453

CONTACT NAME: Samantha Stuart

PHONE

(A/C No. Ext):

FAX

(A/C No): 925.609.5531

E-MAIL

ADDRESS: certificatesprorental@epicbrokers.com

INSURER(S) AFFORDING COVERAGE

NAIC #

INSURER A: ARCH INS CO

11150

INSURER B: WESCO INS CO

25011

INSURER C:

INSURER D:

INSURER E:

INSURER F:

## COVERAGES

CERTIFICATE NUMBER: 65305369

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			PRPRG0090203	08/23/21	08/23/22	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COM/OP AGG \$ 2,000,000 \$
	<input type="checkbox"/> AUTOMOBILE LIABILITY ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) if yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/>	N/A	WWC3584279	05/28/22	05/28/23	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
A	Equipment Floater			PRPRG0090203	08/23/21	08/23/22	Special Form 448,000 Replacement Cost 1,000Ded

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Evidence of Coverage ONLY

## CERTIFICATE HOLDER

## CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

USA

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WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

588 Silver Street, Agawam, MA 01001 tel 413.789.3530 fax 413.789.2776 www.ecsconsult.com

Received

OCT 13 2009

Mayor's Office

Via Certified Mail

Mayor Jeanette McCarthy  
City of Waltham  
610 Main Street  
Waltham, MA 02452

October 7, 2009  
Project No. 01-207783  
Document No. 38303

RE: Parcel 1  
240 Beaver Street  
Waltham, Massachusetts  
RTN 3-29048, 3-28049 & 3-28050

Dear Board of Selectmen:

On behalf of University of Massachusetts Environmental Compliance Services, Inc. (ECS) submitted a **Response Action Outcome (Boiler House & Fly Ash Area) and Phase I Initial Site Investigation & Tier Classification** to the Massachusetts Department of Environmental Protection (MassDEP) on October 5, 2009. A copy of the report can be obtained by contacting the Department of Environmental Protection, 205B Lowell Street, Wilmington, MA 01887. If you should have any questions concerning this submittal, please do not hesitate to contact our office.

Sincerely,  
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Bruce Tease, Ph.D, LSP, PG  
Senior Environmental Professional

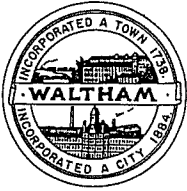
BET/kab

cc: Board of Health - Via Certified Mail  
MassDEP - Via Certified Mail

RECEIVED

Board of Health  
November 10, 2009

RESPONSES TO CONSOLIDATED PUBLIC WORKS  
REGARDING CORNELIA WARREN FARM AND FIELD HOUSE  
240 BEAVER STREET



# CITY OF WALTHAM MASSACHUSETTS

Michael L. J. Chiasson  
Director of Public Works

November 2, 2022

Dear Occupants of 240 Beaver Street, Waltham MA:

The City of Waltham CPW Department is requesting that you provide us with a list of all your own personal property that is located or stored on the 240 Beaver Street site.

Please describe and list the personal property. Example, equipment, sheds, small buildings, shelters, tents, etc.

If there is any other occupant you are aware of other than those listed below, please advise me so I may send them a letter as well.

Thank you for your cooperation.

Sincerely,

Michael Chiasson  
Director of CPW

cc: Waltham Fields Community Farm  
Boston Area Climate Experiment  
Green Rows of Waltham  
Grow Native Massachusetts  
Mass Farmers Market  
Waltham Land Trust  
Healthy Waltham

## Chiasson, Michael

---

**From:** Stacey Daley <Stacey@communityfarms.org>  
**Sent:** Thursday, November 10, 2022 7:56 AM  
**To:** Chiasson, Michael  
**Subject:** Follow Up  
**Attachments:** UMass-CFOWFCF Fully Executed Exhibit A.pdf

**CAUTION: This message originated outside your organization. Exercise caution when opening attachments or on clicking links from unknown senders**

Good morning Mike,

I thank you for our conversation yesterday and very much appreciate your time.

As mentioned, I am pleased to satisfy the City's inquiry and schedule time for a site walk with you and or Stu LaCrosse to review WFCF's infrastructure, locations and personal property at 240 Beaver. Pleased also to highlight items which do not belong to WFCF or any other prior licensed tenants of UMass.

As previously shared with Assessor Frank Craig, I have attached exhibit A from our most recent agreement with UMass which outlines with fairly decent scale, although not 100% accurate, our longstanding and previously approved site use.

Looking forward to scheduling time together.

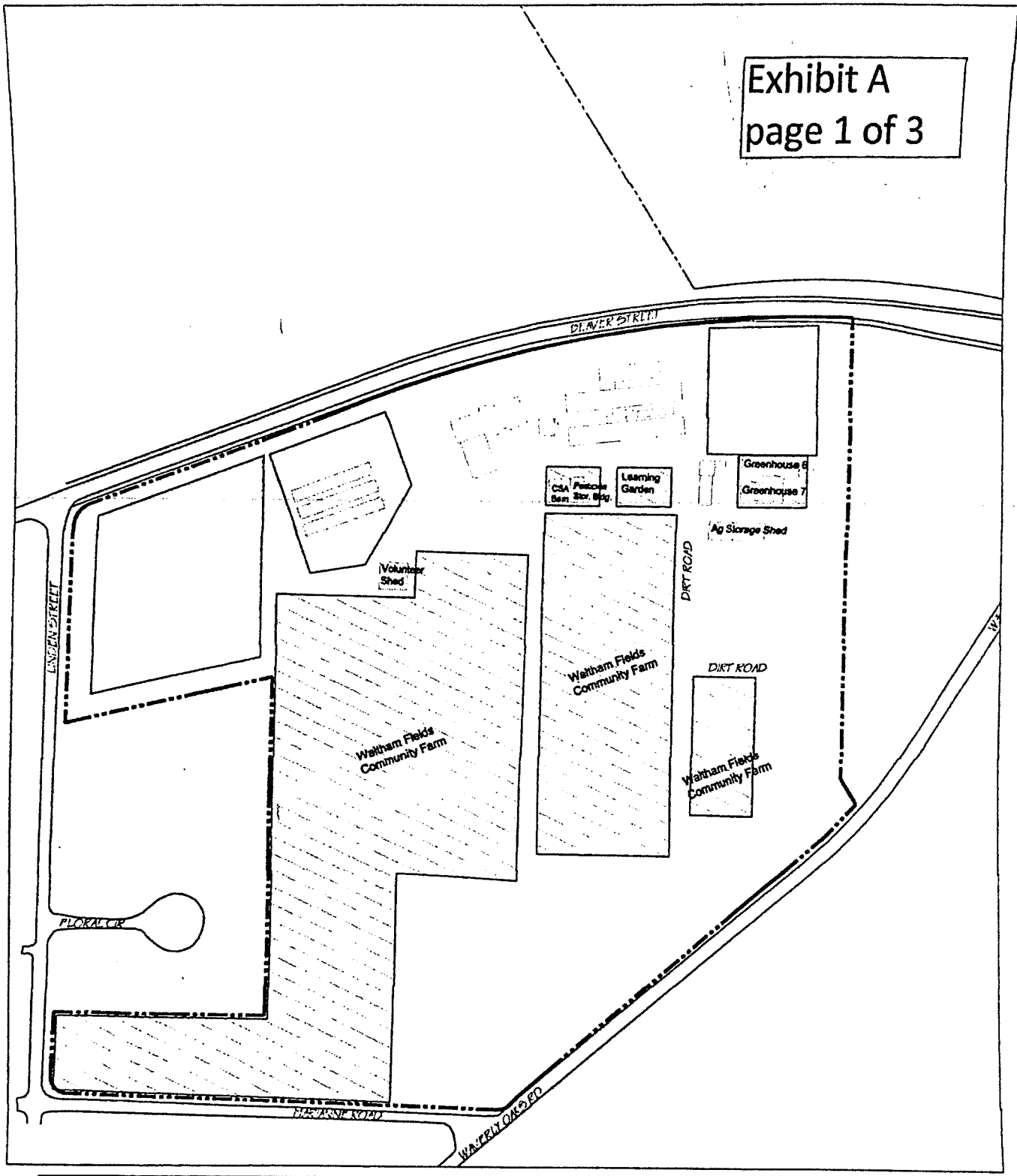
Thanks again.

Stacey

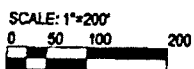
--  
Stacey Daley  
Executive Director  
Waltham Fields Community Farm  
[www.communityfarms.org](http://www.communityfarms.org)  
781-899-2403 Ext. 10  
She, Her, Hers

Support WFCF's Ride for Food Team and Food Access Programs at WFCF!  
Annual Meeting November 3, 2022

Exhibit A  
page 1 of 3



 Licensed Land



WALTHAM STATION  
COMMUNITY FARMS OUTREACH  
EXHIBIT A - LICENSED LAND

1/13/2021

UMass Campus Planning

## Chiasson, Michael

---

**From:** Stacey Daley <Stacey@communityfarms.org>  
**Sent:** Wednesday, November 16, 2022 4:00 PM  
**To:** Chiasson, Michael  
**Cc:** LaCrosse, Stew  
**Subject:** Re: Follow Up

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Good afternoon Mike and Stew,  
Hope you both are doing well this week.

I am following up to learn if we may be able to schedule a date for a site visit with CPW so that the City may acquire information on the personal property of each tenant at 240 Beaver Street.

We would very much like to support the City's request for information and hope to hear back from you so that we may schedule a date.

Thanks very much,  
Sd

On Thu, Nov 10, 2022 at 7:56 AM Stacey Daley <[Stacey@communityfarms.org](mailto:Stacey@communityfarms.org)> wrote:  
Good morning Mike,

I thank you for our conversation yesterday and very much appreciate your time.  
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As previously shared with Assessor Frank Craig, I have attached exhibit A from our most recent agreement with UMass which outlines with fairly decent scale, although not 100% accurate, our longstanding and previously approved site use.

Looking forward to scheduling time together.  
Thanks again.  
Stacey

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## Chiasson, Michael

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**From:** Stacey Daley <Stacey@communityfarms.org>  
**Sent:** Wednesday, November 23, 2022 11:16 AM  
**To:** Chiasson, Michael  
**Cc:** LaCrosse, Stew; Colleen McKiernan  
**Subject:** Re: Follow Up

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Good morning Michael and Stew,  
Following up on my emails on 11/10 and 11/16 and in regards to the correspondence postmarked 11/3/22 from the City to the non-profit tenants of 240 Beaver Street.  
Mike, thank you for your time discussing the request. I seek a response and an opportunity to schedule a site visit with CPW so that we may share awareness of the operational areas long utilized and previously licensed to WFCF by UMass.

This is my third attempt to satisfy this request and hope we may set a time soon and before snowfall may hinder visibility of particular areas.

Looking forward to hear from you,  
I wish you both a happy Thanksgiving and an opportunity for rest.

Be well,  
Stacey

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Hope you both are doing well this week.

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Stacey Daley

Executive Director

Waltham Fields Community Farm

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Stacey Daley

Executive Director

Waltham Fields Community Farm

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781-899-2403 Ext. 10

She, Her, Hers

Support WFCF programs through our 2022 Annual Appeal!

## Chiasson, Michael

---

**From:** Dylan Sanders <sanders@sugarmanrogers.com>  
**Sent:** Thursday, December 1, 2022 2:25 PM  
**To:** Chiasson, Michael  
**Cc:** LaCrosse, Stew; Stacey Daley  
**Subject:** 240 Beaver Street  
**Attachments:** 2022.12.01 Waltham Fields-Letter to Michael Chiasson (re 240 Beaver Street)  
4890-3606-7393 v.1.pdf

**CAUTION: This message originated outside your organization. Exercise caution when opening attachments or on clicking links from unknown senders**

Dear Mr. Chiasson,

Please see the attached correspondence on behalf of Waltham Fields Community Farms.

Thank you,

Dylan Sanders  
617.227.3030 (O) | 617.549.5828 (M)

**Sugarman  
Rogers** 

Sugarman, Rogers, Barshak & Cohen, P.C.  
<http://www.sugarmanrogers.com>

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Send us files of any size securely by clicking here: <https://srbcfileretrans.sugarmanrogers.com/filedrop/upload>

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Sugarman, Rogers, Barshak & Cohen, P.C.

C. DYLAN SANDERS  
SANDERS@SUGARMANROGERS.COM

December 1, 2022

**By Email**

Mr. Michael Chiasson  
Director of Public Works  
City of Waltham  
165 Lexington Street  
Waltham, MA 02452-4638

Re: *240 Beaver Street, Waltham, Massachusetts*

Dear Mr. Chiasson:

This firm represents Waltham Fields Community Farm ("WFCF"), a tenant at the former UMass Waltham Extension Station at 240 Beaver Street, Waltham. I am writing in response to your November 2, 2022 request to the occupants of 240 Beaver Street, including WFCF, to provide the Department of Public Works with a list of all personal property that is located or stored on the 240 Beaver Street.

As you know from your conversations and communications with Executive Director Stacey Daley, WFCF has offered to cooperate with and satisfy your request with a site walk with you or your designee, pointing out the location of WFCF's property, what portions of 240 Beaver Street are used or not used by WFCF, and what property on the site does not belong to WFCF. In addition to offering the site visit, Ms. Daley has shared with you the schedule from WFCF's last agreement with UMass outlining WFCF's approved uses of 240 Beaver Street.

WFCF looks forward to your reply and to promptly scheduling the site visit, which you may do directly with Ms. Daley.

Thank you.

Sincerely,

*Dylan Sanders*

C. Dylan Sanders

cc: Ms. Stacey Daley, Executive Director, WFCF  
CDS/kt

4890-3606-7393, v. 1

**Chiasson, Michael**

---

**From:** Heather Pruiksmas <hpruiksmas@grownativemass.org>  
**Sent:** Monday, November 14, 2022 5:03 PM  
**To:** Chiasson, Michael  
**Subject:** Grow Native Massachusetts property at 240 Beaver St

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Dear Michael,

I hope you don't mind my reaching out via email. I wanted to better understand the request you mailed on November 2 to the tenants of 240 Beaver St, including Grow Native Massachusetts, to provide a list of personal property located or stored at the site.

From the context of the examples (equipment, sheds, small buildings, shelters, tents, etc) and the fact that the request comes from you at Waltham CPW and not from the Buildings Department, I assume you are only seeking information about structures and equipment exterior to the main building (in which our offices are located). If that is an accurate assumption, then I can easily let you know that Grow Native Massachusetts has one 8'x10' garden shed (installed by Sheds USA in 2016) with 4' ramp, located in the Rose Garden area, in which we have stored garden and plant sale tools such as wheelbarrows and plant sleds, shovels, shade tents, hand clippers, a motion sensor light (for plant sale security), plant sale signage, garden stakes, extension cords, and hoses. If required, I can compile a more precise inventory of the shed contents, but I was uncertain if this was the level of detail you seek.

The tenants' group (members of all six nonprofits based at 240 Beaver St) met last week, and we all agreed that the most effective way for each of us to clearly convey how we currently use the grounds here would be if you would accept an invitation for a site walk. I would be very happy to meet you here on a date convenient to you and show you the location of our shed, and how that relates to our use of outdoor space on this property. Please let me know if you would be able to fit a visit into your schedule.

All best,

Heather

**Heather Pruiksmas** (she/her/hers)  
Executive Director  
Grow Native Massachusetts

Every garden matters ~ Every landscape counts ®

[hpruiksmas@grownativemass.org](mailto:hpruiksmas@grownativemass.org)  
781-790-8921  
[www.grownativemass.org](http://www.grownativemass.org)

## Chiasson, Michael

---

**From:** Orians, Colin <Colin.Orians@tufts.edu>  
**Sent:** Wednesday, November 16, 2022 10:12 PM  
**To:** Chiasson, Michael; Bower, Brian  
**Cc:** Alden Griffith  
**Subject:** Boston Area Climate Experiment (BACE) at Waltham Field Station

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Dear Michael Chiasson and Brian Bower,

I understand the two of you are overseeing the next steps at the Waltham Field Station. We received your letter Mr. Chiasson regarding the infrastructure at the Boston Area Climate Experiment (BACE). Alden Griffith, copied, and I are the ones overseeing the ongoing experiments there. I am from Tufts and Alden Griffith is from Wellesley. We have both done a lot of work there and the current experiments are being done by Alden and by graduate and undergraduate students. In addition to using the structure for our climate-related research, we have lots of our supplies stored in the sheds.

We would very much appreciate the opportunity to discuss our work with you, and to introduce you to our facilities. Meeting in person would also help us better understand what information you are seeking. Brian, we do not use the building except to get water or use the restrooms.

Please let us know if you have any question.

Best Regards,

Colin Orians (and Alden Griffith)

--

Colin Orians  
Professor of Biology and  
Director of Environmental Studies  
364 Robinson Hall  
200 College Avenue  
Tufts University  
Medford, MA. 02155  
colin.oriens@tufts.edu

## Chiasson, Michael

---

**From:** Orians, Colin <Colin.Orians@tufts.edu>  
**Sent:** Thursday, November 17, 2022 4:33 PM  
**To:** Bower, Brian; Chiasson, Michael  
**Cc:** Alden Griffith  
**Subject:** Re: [External] RE: Boston Area Climate Experiment (BACE) at Waltham Field Station

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Dear Brian and Michael,

Thank you for writing so quickly. We did not realize this had anything to do with the RFP. I thought you had wanted to get a better handle on what we have at BACE.

Regardless, do let me know if you want to see it together and we will make time. Or perhaps a zoom call with the two of us would be warranted.

Also wanted to mention that our old contract with UMass was given to Frank Craig and that includes a rough map of BACE.

Best,  
Colin

CC: Alden

Colin Orians  
Professor of Biology  
364 Robinson Hall  
200 College Ave  
Medford, MA 02155  
Tel: 617-627-3543  
colin.oriens@tufts.edu

---

**From:** Bower, Brian <bbower@city.waltham.ma.us>  
**Sent:** Thursday, November 17, 2022 4:21 PM  
**To:** Orians, Colin <Colin.Orians@tufts.edu>; Chiasson, Michael <mchiasson@city.waltham.ma.us>  
**Cc:** Alden Griffith <agriffit@wellesley.edu>  
**Subject:** [External] RE: Boston Area Climate Experiment (BACE) at Waltham Field Station

Colin,

This is in the process of an RFP once finalized you will hear from the City Purchasing agent.

Brian Bower  
City of Waltham  
Chief Building Inspector  
781-314-3285 Office

781-858-3314 Cell

**From:** Orians, Colin <Colin.Orians@tufts.edu>

**Sent:** Wednesday, November 16, 2022 10:12 PM

**To:** Chiasson, Michael <mchiasson@city.waltham.ma.us>; Bower, Brian <bbower@city.waltham.ma.us>

**Cc:** Alden Griffith <agriffit@wellesley.edu>

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We would very much appreciate the opportunity to discuss our work with you, and to introduce you to our facilities. Meeting in person would also help us better understand what information you are seeking. Brian, we do not use the building except to get water or use the restrooms.

Please let us know if you have any question.

Best Regards,

Colin Orians (and Alden Griffith)

--  
Colin Orians  
Professor of Biology and  
Director of Environmental Studies  
364 Robinson Hall  
200 College Avenue  
Tufts University  
Medford, MA. 02155  
[colin.orian@tufts.edu](mailto:colin.orian@tufts.edu)

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## Chiasson, Michael

---

**From:** Sonja Wadman <swadman@walthamlandtrust.org>  
**Sent:** Tuesday, November 29, 2022 4:31 PM  
**To:** Chiasson, Michael; LaCrosse, Stew  
**Subject:** WLT Property @ 240 Beaver St.

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Hello Mike and Stew,

I hope you both are well. I apologize for my delay in getting back to you regarding the letter sent to occupants of the Field Station seeking a list of personal property. I understand Stacey Daley of Waltham Fields Community Farm and other here at 240 Beaver Street have invited you to the property for a tour of who owns what, and I am more than happy to join in that effort.

But the Waltham Land Trust has very little to show: two small offices on the first floor which contain two printers, stewardship supplies like trash bags, gloves, and poison icy wipes, a desk, a table, several hand-me-down chairs, and lots of paperwork.

We also have a small shed tucked under the emergency staircase in the back of the building. The shed contains tools and more stewardship supplies. It's basically falling apart and might not last the winter. We have purchased another shed, the same size, to replace it but have held off on installing it given the changes in property ownership.

Kindest regards,  
Sonja

**Chiasson, Michael**

---

**From:** Rob Thompson <Rob@healthy-waltham.org>  
**Sent:** Friday, December 2, 2022 12:00 PM  
**To:** Chiasson, Michael  
**Subject:** Waltham Fields - Healthy Waltham

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Michael,

I am reaching out to you as it is my understanding that the City of Waltham has asked for a listing of items at the Waltham Community farms.

Healthy Waltham has a leased refrigeration unit at the farm located next to the boiler building.

Please let me know any additional information that you need.

Best  
Rob

Rob Thompson  
Chief Operations Officer  
Healthy Waltham  
510 Moody St.  
Waltham, MA 02453  
<http://www.healthywaltham.org>  
614-638-7629 (cell)

**Chiasson, Michael**

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**From:** Heather Pruiksma <hpruiksma@grownativemass.org>  
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All best,

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**Cc:** Alden Griffith  
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I hope you both are well. I apologize for my delay in getting back to you regarding the letter sent to occupants of the Field Station seeking a list of personal property. I understand Stacey Daley of Waltham Fields Community Farm and other here at 240 Beaver Street have invited you to the property for a tour of who owns what, and I am more than happy to join in that effort.

But the Waltham Land Trust has very little to show: two small offices on the first floor which contain two printers, stewardship supplies like trash bags, gloves, and poison icy wipes, a desk, a table, several hand-me-down chairs, and lots of paperwork.

We also have a small shed tucked under the emergency staircase in the back of the building. The shed contains tools and more stewardship supplies. It's basically falling apart and might not last the winter. We have purchased another shed, the same size, to replace it but have held off on installing it given the changes in property ownership.

Kindest regards,  
Sonja

## Chiasson, Michael

---

**From:** Rob Thompson <Rob@healthy-waltham.org>  
**Sent:** Friday, December 2, 2022 12:00 PM  
**To:** Chiasson, Michael  
**Subject:** Waltham Fields - Healthy Waltham

**CAUTION:** This message originated outside your organization. Exercise caution when opening attachments or on clicking links from unknown senders

Michael,

I am reaching out to you as it is my understanding that the City of Waltham has asked for a listing of items at the Waltham Community farms.

Healthy Waltham has a leased refrigeration unit at the farm located next to the boiler building.

Please let me know any additional information that you need.

Best  
Rob

Rob Thompson  
Chief Operations Officer  
Healthy Waltham  
510 Moody St.  
Waltham, MA 02453  
<http://www.healthywaltham.org>  
614-638-7629 (cell)



ENVIRONMENTAL INFORMATION  
REGARDING CORNELIA WARREN FARM AND FIELD HOUSE  
240 BEAVER STREET

**LAW DEPARTMENT LETTER 11/23/22**

## Mayor

---

**From:** Stanton, Luke  
**Sent:** Wednesday, November 23, 2022 1:58 PM  
**To:** Mayor  
**Subject:** Confidential: FW: Beaver Street Docs - Waltham - Senator Barrett - North Side  
Confidential

**Importance:** High

Mayor:

Gerry Leone sent me this earlier this week. If you click on the documents page, some of these are our CDW reports which we gave to Umass during the negotiations

I had previously provided a copy of the CDW report to Dee Kricker, who did an FOA back in April.

I do not see how we can object to any of this. I just want you to be aware that Senator Barrett was the person asking for these records.

Luke Stanton, Esq.  
City of Waltham Law Dept.  
119 School Street  
Waltham, MA 02451  
lstanton@city.waltham.ma.us  
(781) 314-3330

**CAUTION:** This email originated from outside your organization. Exercise caution when opening attachments or on clicking links from unknown senders.

---

**From:** Leone, Gerard <GLEone@umassp.edu>  
**Sent:** Monday, November 21, 2022 12:13 PM  
**To:** Stanton, Luke <lstanton@city.waltham.ma.us>; Leone, Gerard <GLEone@umassp.edu>; Lepper, Allison (UMass Amherst) <alepper@umass.edu>  
**Cc:** Dunn, Christopher (UMass Amherst) <cdunn@admin.umass.edu>  
**Subject:** Beaver Street Docs - Waltham - Senator Barrett - North Side  
**Importance:** High

**CAUTION:** This message originated outside your organization. Exercise caution when opening attachments or on clicking links from unknown senders

Luke:  
I hope all is well.

The University has received a request from MA Senator Barrett for copies of any and all reports on the "environmental matters relating to 225-2257 Beaver Street, Waltham".

We have compiled our reports, most of which are generated by or on behalf of the University. However, some of the documentation we have consist of reports prepared by CDW on behalf of Waltham. While I believe the MA Public Records Law would require us to provide all records in our possession – including the copies of the Waltham reports we have from you – to Senator Barrett, I am writing to notify you of the request and provide you with an opportunity to let me know if you have any specific concerns or objections to the disclosure of the Waltham reports.

Copies of the documents we have from Waltham are compiled in a Dropbox folder at: Waltham Documents.

If you have any questions about accessing the documents in the Dropbox, Allie will help with that.

Please let me know as soon as possible whether Waltham has any objections to the University complying with the PRL in producing the Waltham Documents to Senator Barrett. As you know, any objection would need to be consistent with the enumerated exemptions to the MA Public Records Law, and both UMass and Waltham's obligations under same.

Thanks,  
Gerry

## ENVIRONMENTAL

I	01 – Supplemental Phase II Subsurface – Beaver Street 11/21/2022 10:10 am	12
	02 – Supplemental Phase II FIGURE 1 – Site Location Map.pdf 11/21/2022 10:10 am	1
	03 – Supplemental Phase II FIGURE 2 – 225-227 Beaver Street 11/21/2022 10:10 am	1
	04 – Supplemental Phase II FIGURE 3 – 240 Beaver Street 11/21/2022 10:10 am	1
	05 – Supplemental Phase II TABLE 1 – Soil Data Table.pdf 11/21/2022 10:10 am	3
	06 – Supplemental Phase II TABLE 2 – Hand Boring Data Ta 11/21/2022 10:10 am	2
	07 – Supplemental Phase II APPENDIX A – Soil Boring Logs 11/21/2022 10:10 am	25
	08 – Supplemental Phase II APPENDIX B – Soil Laboratory 11/21/2022 10:10 am	103
	09 – Supplemental Phase II APPENDIX C – Wetland Hand B 11/21/2022 10:10 am	127
	10 – Supplemental Phase II APPENDIX D – Microvision Anal 11/21/2022 10:10 am	9
	CDW Beaver Street – Waltham MA Haz Report 2020 11/21/2022 10:10 am	113
	CDW Phase II Subsurface Beaver Street Final.pdf 11/21/2022 10:10 am	268
	CDW UMass Field Station Phase I Beaver St ASTM 11/21/2022 10:10 am	1,497
	Pgs.1-5/Rest on disc	
II	CDW DRAFT – RELEASE ABATEMENT MEASURE PLAN & TSCA PERFORMANCE BASED CLEANUP PLAN, 240 Beaver Street, Waltham, MA RTNs 3-36027 and 3-36180	120
	SUMMARY OF WORK	23



01 - Supplemental Phase II Subsurface - Beaver Str... 11/21/2022 10:10 am

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02 - Suppl Phase II FIGURE 1 - Site Location Map.pdf 11/21/2022 10:10 am

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03 - Suppl Phase II FIGURE 2 - 225-227 Beaver St.... 11/21/2022 10:10 am

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04 - Suppl Phase II FIGURE 3 - 240 Beaver St.pdf 11/21/2022 10:10 am

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05 - Suppl Phase II TABLE 1 - Soil Data Table.pdf 11/21/2022 10:10 am

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CDW Beaver Street -Waltham MA Haz Report 2020...11/21/2022 10:10 am

113

CDW Phase II Subsurface Beaver Street Final.pdf 11/21/2022 10:10 am

268

CDW Umass Field Station Phase 1 Beaver St ASTM... 11/21/2022 10:10 am

1,497



**CDW CONSULTANTS, INC.**  
*CIVIL & ENVIRONMENTAL ENGINEERS*

**SUPPLEMENTAL PHASE II  
SUBSURFACE INVESTIGATION**

**City of Waltham  
225-227 & 240 Beaver Street  
Waltham, MA**

**Prepared for**

**City of Waltham  
119 School Street  
Waltham, MA 02451**

**January 2020**

**CDW Project # 1830.1**



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## FIGURES

- Figure 1: Site Location Map  
Figure 2: 225-227 Beaver Street Site Plan with Sampling Locations  
Figure 3: 240 Beaver Street Site Plan

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- Table 1: Soil Data Table  
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Appendix B: Soil Laboratory Analytical Reports  
Appendix C: Wetland Hand Boring Analytical Report  
Appendix D: Microvision Analytical Reports



## **1.0 INTRODUCTION**

CDW Consultants, Inc. (CDW), on behalf of our client, City of Waltham, has conducted a supplemental subsurface investigation on the properties located at 225-227 and 240 Beaver Street, Waltham, Massachusetts (Figure 1, "Site"). The investigation included the advancement of soil borings and hand-driven borings, and soil sampling and analysis. This investigation was conducted in November and December 2019. The investigation was conducted in order to further delineate areas of potential environmental impact following the prior Phase II Limited Site Investigation.

### **1.1 Purpose**

The purpose of the investigation was to evaluate subsurface conditions in an apparent dumping area on the southern side of 240 Beaver Street, and potential dumping areas located in the woods at 225-227 Beaver Street. In addition, the investigation included delineating potential impacts to the wetland area at the southeast portion of 225-227 Beaver Street from the Phoenix ("fly ash") project conducted in the 1970's. This investigation was performed in accordance with Massachusetts General Law (MGL) Chapter 21E.

### **1.2 Site & Surrounding Area Description**

CDW previously conducted an ASTM Phase I investigation of the properties listed as 240 Beaver Street and 225-227 Beaver Street, in Waltham, Massachusetts (the "Site"; Figure 1). The assessment includes one 27.9-acre parcel located at 240 Beaver Street and one 30.84-acre parcel located at 225-227 Beaver Street. Both properties comprise the University of Massachusetts Agriculture Experiment Station that was gifted to the Commonwealth in the early 1900s for educational purposes. The property is still owned by the University of Massachusetts (University).

Parcel 1 (240 Beaver Street) consists of administration buildings, greenhouses, a research area, small community garden plots, and agricultural fields. This parcel is bounded by Beaver Street to the north, a baseball field and Waverly Oaks road to the east and southeast, Marianne Road to the south, and Linden Street and the residential properties at Linen Circle and Floral Circle to the west. The southern parcel (referenced as parcel #1) is located at 240 Beaver Street and is improved with a 7,474 square foot administration building built in 1948. The three-story building has approximately 20 offices and an attached auditorium of approximately 5,000 square feet. It is currently used for office space and is known as the main building of the Waltham Experiment Station. The parcel also contains the Gray Workshop Building with four attached greenhouses, a Boiler Building that formerly generated heat for the buildings, the Corn Laboratory with two attached greenhouses, and hoop-style greenhouses. The Administration Building, Gray Workshop Building and the Boiler Building are the main structures currently in use. The parcel is bordered by the Cornelia Warren Ball Fields to the east, Waverly Oaks Road- Route 60 to the south and a residential neighborhood to the west. Access to Parcel 1 is via three gravel driveways that enter the site from Beaver Street. Two driveways provide access and parking along the east, west, and south side of the Administration Building and the other provides access along the eastern side of the Gray Workshop Building with parking on the south side of the building.

The Parcel 1 buildings are connected to municipal water, sewer and natural gas. The Administration Building was formerly heated with #2 fuel oil, supplied by two 7,500-gallon underground storage tanks (USTs). The Gray Building was heated with #2 fuel oil, supplied by one 1,000-gallon UST. All known USTs have been removed.

Parcel 2 (225-227 Beaver Street) consists of an abandoned farmhouse and dairy farm buildings including barns, storage sheds, and foundation structures for former buildings. Most of these structures are in disrepair and several have collapsed. The upland field west of the wetland was used for hay production and grazing. The eastern portion of this parcel contains approximately 16 acres of wetlands, meadow and succession forest vegetation. The wet meadow and wetland areas were not developed. The parcel is bounded to the northeast by the Fernald State School, to the south by Waverly Oaks Road and Beaver Street, to the west by Camp Cedar Hill and associated buildings owned by the Girl Scouts of Eastern Massachusetts, and to the east by Waverly Oaks Road. The wetlands contain an approximately 4,600 square feet area of fly ash material brought from an off-site source used for an agricultural research experiment conducted in the 1970's known as the Phoenix Project (a joint USEPA, Mass DEP and MA DPW project).

The Site is located on the Boston Southwest United States Geological Survey (USGS) 1987 Quadrangle Map at the following approximate location and elevation:

<b>Southern Parcel 1</b>	
<b>Universal Transverse Mercator (UTM) Zone 19 Coordinates</b>	
317708.01	UTM E (Meters)
4694755.68	UTM N (Meters)
<b>Latitude/Longitude</b>	
42.383709°	Latitude (North)
-71.214428°	Longitude (West)
<b>Elevation</b>	
58	Feet above sea level
<b>Western Parcel 2</b>	
<b>Universal Transverse Mercator (UTM) Zone 19 Coordinates</b>	
318032.00	UTM E (Meters)
4694878.00	UTM N (Meters)
<b>Latitude/Longitude</b>	
42.384886°	Latitude (North)
-71.210534°	Longitude (West)
<b>Elevation</b>	
58-48	Feet above sea level

## **2.0 SITE RELEASE HISTORY**

### **2.1 240 Beaver Street - Parcel 1**

A portion of 240 Beaver Street was assigned Release Tracking Number (RTN) 3-28048 for a release of oil. A Class B-1 RAO was submitted to the Massachusetts Department of Environmental Protection (MassDEP) in October 2009, without remediation conducted, to achieve site closure. A portion of 240 Beaver Street was assigned RTN 3-28050 for a release condition of heavy metals in soil. A Class A-1 RAO was submitted to MassDEP on October 11, 2009 after soil remediation was completed, to achieve site closure. A portion of 240 Beaver Street was the site of an upland fly ash research area in the 1970s. No reportable conditions have been identified in the areas where fly ash was deposited.

In December 2019, the University submitted a Release Notification Form for the presence of chromium, lead and DDT in soil in a filled in area within the southeastern part of the property.

### **2.2 225-227 Beaver Street - Parcel 2**

In 1977, research was conducted at the UMASS experimental station by placing approximately 66-77 tons of municipal incinerator ash residual in two areas (A and B) on 225-227 Beaver Street immediately bordering a wetland, to simulate the effects of landfill disposal in the immediate vicinity of wetlands. According to previous reports, the researchers were unaware that some of the ash was actually placed within the wetlands resource area. Area A was ash placed at grade level over an area of approximately 25 feet x 45 feet. Area B was ash placed approximately 1.8 feet below grade to the north of Area A, within an area of approximately 15 feet x 35 feet. Since the time of ash disposal, the area has become overgrown and there is no visible surficial evidence of the ash disposal cells. Both Areas are currently surrounded by a 6 foot high chain link fence.

The ash disposal research, called the Phoenix Project, is recognized with a metal sign at the Site as a joint project of the United States Environmental Protection Agency (USEPA), the Massachusetts Department of Environmental Quality Engineering (DEQE), currently the MassDEP, and the Massachusetts Department of Public Works (DPW). The conclusion of the research was that metals were considered to have been immobilized by the highly organic soils present.

The Site was first reported to the MassDEP in October 2008, after an investigation detected lead and cadmium in soil that exceeded Reportable Concentrations. This triggered a 120-day reporting requirement and the assignment of RTN 3-28049 by the MassDEP. A Phase I Initial Site Investigation and Phase II Scope of Work report was submitted to the MassDEP in October 2009. The Site was classified Tier II. Comprehensive site investigations defined the degree and extent of heavy metals in soil and groundwater at the Site. Lead, zinc and cadmium in soil and cadmium in groundwater exceeded the Method 1 Risk Characterization Standards. A combined Phase II Comprehensive Site Assessment, Phase III Identification, Evaluation, and Selection of Comprehensive Remedial Action Alternatives, and Class C-1 Temporary Solution RAO Statement report was submitted to the MassDEP in October 2011. A 5-year review of the Temporary Solution was submitted to MassDEP in July 2016.

### **3.0 SUMMARY OF PHASE II LIMITED SUBSURFACE INVESTIGATION**

CDW has made the following observations from the Phase II Subsurface Investigation:

On May 28 and 29, 2019, CDW advanced nine (9) soil borings (GP1-1 to GP1-9) at 240 Beaver St and GP2-1 to GP2-4 at 225 to 227 Beaver Street, respectively. A two-inch diameter monitoring well was installed to a depth of 20 feet in borings GP1-3MW, GP1-5MW, and GP1-7MW at 240 Beaver Street. No wells were installed at 225-227 Beaver Street due to possible bedrock refusal in all three borings and subsequent adjacent boring locations.

Soil samples were collected continuously from samples from each boring and field-screened with a PID for TOVs. One soil sample from each of nine (9) borings was selected and submitted for laboratory analysis for EPH, VPH, VOCs, PCB's, Herbicides, Pesticides, and MCP 14 Metals. Laboratory analysis of soil samples revealed detectable concentrations EPH compounds, total metals, and pesticides. EPH compounds detected in GP1-7 (10-12') and GP1-8 (10-12') are reported below MCP RCS-2 Reportable Concentrations. Low levels of pesticides were detected in GP1-7 (3-5'). Total Metals compounds were detected in GP1-7 (10-12') and GP1-8 (10-12'). Concentrations of Chromium (730 mg/kg), Lead (220 mg/Kg), and DDT (12 mg/Kg). DDT was discontinued in 1972, but residues from historical use still remain.

On June 5, 2019, CDW collected groundwater samples from the newly installed monitoring wells (GP1-3MW, GP1-5MW, and GP1-7MW) and one existing monitoring well MW-2. Groundwater samples were analyzed for EPH, VPH, VOCs, PCB's, and MCP14 metals. Low levels of C9 to C18 Aliphatics and Ethylbenzene were detected in a previously installed one-inch micro well in the vicinity of the former 7,500-gallon fuel oil UST's. Low levels of dissolved metals were detected in all four monitoring wells.

Low levels of pesticides were detected in monitoring well GP1-7MW located in the southern portion of the site. No concentrations exceeded MCP RCGW-2 Standards. Low concentrations of VOC's were detected in monitoring wells GP1-7MW and MW-2. No concentrations exceeded MCP RCGW-2 concentrations.

## **4.0 SUPPLEMENTAL SUBSURFACE INVESTIGATION**

### **4.1 Topography and Hydrogeologic Features**

The Site is located between 48 and 58 feet above sea level, and the topography is generally hilly. According to the USGS geological map the bedrock at the Site consists of diorite and gabbro (Zdigh) (Zen et. al. 1983). The Salem Gabbro-Diorite is described as a Proterozoic mafic plutonic rock that retains its igneous texture with some feldspars and mafic minerals altered to chlorite and epidote. There were no bedrock outcrops observed at the Site.

There are no known drinking water source areas or private well supplies within 500 feet of the Site. The Site is not located within a Potentially Productive Aquifer and no community or known non-community drinking water supply, or MassDEP-approved or interim wellhead protection areas, exist within one mile of the Site.

Federal Emergency Management Agency Flood Insurance Rate Maps indicate that the wet meadow wetland basin is located in a Zone A2 floodplain, which is defined as an area within the 100-year flood zone where base flood elevations and flood hazard factors have been determined. The periphery of this area is designated as a Zone B floodplain, which is defined as an area between the 100 year and the 500-year flood limits. The remainder of southern parcel is located in Zone C floodplain which is outside of the 500-year flood limit.

### **4.2 Soil Borings**

On November 19 through November 21, 2019 CDW completed 27 hand borings within the wetland area of 225-227 Beaver Street, to evaluate the potential migration of previously identified SVOC's or Heavy Metals from the former "Phoenix Project" along the western edge of the wetlands. A grid pattern was established west to east away from the edge of the former fly ash experimental project. The hand borings were completed using a hand auger or post hole digger.

On December 9, 2019 CDW observed the advancement of soil borings on both properties. The soil borings were advanced by track mounted Geoprobe equipped with 5-foot long 2-inch diameter large bore sampling tubes. Soil samples were collected continuously in 5-foot acetate sleeves inserted into large bore sampler to depths up to 15 feet at 240 Beaver Street and up to 10 feet at 225-227 Beaver Street. All soil samples were classified on-site. CDW's subcontractor, Crawford Drilling of Westminster, MA completed the advancement of the soil borings. CDW's subcontractor, Contest Laboratories, Inc. of East Longmeadow, Massachusetts, completed the laboratory sample analyses.

Nine (9) soil borings (GP4-1 to GP4-9) were advanced at the southern fill area at 240 Beaver Street. GP4-1 to GP4-8 were completed to further evaluate the elevated levels of Chromium and Lead which exceeded RCS-1 concentrations in previously completed boring GP1-7. GP4-9 was completed on the access road at the southeast corner of the farm fields where recent illicit dumping of material on the roadway had taken place and observed by farm employees.

On December 9, 2019 CDW observed the advancement of six (6) soil borings (GP3-1 to GP3-6) at 225 to 227 Beaver Street. GP3-1 to GP3-3 were completed in an area approximately 50 feet northeast of the former residence to investigate mounded earth with debris. GP3-4 and GP3-5 were completed

approximately 200 feet to the east of the residence in an area that appeared to have been a former disposal area of glass and other materials. GP3-6 was completed in an approximate area where former motor vehicles and equipment from the farm reportedly had oil changes with the used oil not disposed of in a manner consistent with current state and local regulations.

The current boring locations and previous subsurface investigation locations are depicted on Figure 2 and Figure 3. Soil Boring Logs are presented in Appendix A. No groundwater monitoring wells were installed during the Supplemental Subsurface Investigation.

#### **4.3 Soil Screening and Laboratory Samples**

Soil samples were collected continuously from samples from each boring and field-screened with a photoionization detector (PID) using the headspace method. The soil headspace screening results are provided on the boring logs in Appendix A. The PID is an instrument used to quantify total organic volatiles (TOVs) that ionized at or below 10.6 electron volts (a range which includes gasoline and some fuel oil organics). The detection limit for the instrument is 0.1 parts per million (ppm). One soil sample from of eight (8) of the nine (9) borings at 240 Beaver Street and three (3) of the six (6) borings at 225-227 Beaver Street was selected and submitted for laboratory analysis via Semi Volatile Organic Compounds (SVOC's), and MCP 14 metals. In addition, one soil sample was submitted for Extractable Petroleum Hydrocarbon analysis (EPH) and one sample submitted for PCB's. One soil sample from each boring at the depth that exhibited the highest field screening reading or field evidence of contamination was collected. If no field instrumentation readings were registered during drilling, the soil sample was collected from the vadose zone. The samples were preserved by ice and refrigeration, as appropriate, prior to laboratory analysis, and delivered to the laboratory accompanied by an appropriate chain of custody record.

#### **4.4 Groundwater Sampling**

Groundwater samples were not collected from the previously installed monitoring wells.

#### **4.5 Groundwater Gauging**

Groundwater gauging was not conducted during the supplemental Phase II investigation. Groundwater in the northern portion of 240 Beaver St appears to be flowing in a northeasterly direction toward a wetland area located in the southern portion of 225-227 Beaver Street. Groundwater in the southern portion of the site appears to be flowing in a southwesterly direction towards low wetland areas closest to Waverly Oaks Road. The groundwater flow direction was not calculated at 225-227 Beaver Street.

## **5.0 NATURE AND EXTENT OF CONTAMINATION**

The supplemental Phase II Subsurface Investigation focused on further delineating areas around the southern dumping area at 240 Beaver Street, the fly ash experimental area adjacent to the wetlands and a previously unidentified disposal area at 225-227 Beaver Street.

### **5.1 Soil and Groundwater Classifications**

The selection of a soil classification of RCS-1, as defined in the Massachusetts Contingency Plan (MCP), 310 CMR 40.0361(1)(a), for the comparison of Reportable Concentrations, is applicable to the Site because:

- The soil sample locations are located within 500 feet of a residential property.
- The property is zoned as a recreational area and is open to the public.

The selection of a groundwater classification of RCGW-2, as defined in the MCP, 310 CMR 40.0362, for the purpose of identifying Reportable Concentrations, was based upon the following criterion:

- RCGW-2 shall be applied to all groundwater cases not involving GW-1 classification.

### **5.2 Soil/Sediment Sample Analysis Results**

The results of the soil and sediment sample analysis were reviewed. The results of all soil analyses are summarized in Table 1. Copies of the laboratory analytical reports are included in Appendices B, C and D.

#### **225-227 Beaver Street – Wetland Sampling**

CDW collected hand borings at 27 locations within the wetland area and collected sediment samples from 6-12" below the surface. From those borings, 20 soil samples were submitted and analyzed for SVOC's and MCP14 Metals. The hand boring locations were established in a rough grid pattern based on safe access to various locations within the wetland.

Hand boring laboratory analytical results are summarized in Table 3 and compared with MassDEP's Revised Sediment Screening Values. The sediment screening values are intended for use in Stage I Environmental Risk Characterization for sites where oil or hazardous material has been released or migrated to sediment. Stage I sediment screening values are used to evaluate the need for a quantitative Stage II Environmental Risk Characterization.

Hand borings HB-1 through HB-5 were completed directly east of the "fly ash" area. HB-5 identified Antimony (32 mg/Kg), Lead (2,700 mg/Kg), Silver (130 mg/Kg), and Zinc (5,100 mg/Kg). The remaining borings: HB-6 through HB-11, HB12 through HB-18, HB-19 through HB-23, HB-24 through HB-26, and HB-27 were completed in approximate 180 foot grids from the fly ash disposal area and the eastern property line.

Concentrations of lead and zinc closest to the original ash disposal area exceeded the sediment screening values. In addition, lead concentrations exceeded sediment screening values in hand borings HB-6, HB-7, HB-8, HB-9, HB-10, HB-14, HB-19 and HB-24. HB-6 is located hydrologically upgradient of the ash disposal area but is the closest sample location to the glass and ash disposal area. Lead concentrations that exceeded sediment screening values in HB-19 and HB-24 are located on the other side of the stream

bed along the eastern property line and may be attributed to a former railroad siding and tracks that are still visible along the property boundary. Trace levels of semi-volatile organic compounds were also identified in hand borings HB-6, HB-7, HB-9, HB-10, HB-14, HB-19, and HB-24.

A sediment sample collected from HB-5 (0-1') was submitted to Microvision Laboratories for Microscopic Analysis for Coal, Coal Ash, and Wood Ash. Results indicated the presence of coal, coal ash, and wood ash.

#### 240 Beaver Street – Geoprobe Drilling

Soil samples from the southern fill area were submitted and analyzed for Semi-Volatile Organic Compounds (SVOC's) and MCP14 metals. On soil sample from boring GP4-2 was submitted for PCB's based on visual observations of a caulking-like material from 3-5 feet below grade during the subsurface investigation.

Laboratory analysis of soil samples did not identify detectable concentrations of SVOC's above laboratory minimum detection limits. Concentrations of arsenic, barium, beryllium, cadmium, chromium, lead, nickel, vanadium, and zinc were identified in borings supplemental borings GP4-1 through GP4-7, and GP4-9. The concentrations of metals did not exceed RCS-1 concentrations. The caulk-like material from soil boring GP4-2 (6-8') reported PCB's (66 mg/Kg) above RCS-1 concentrations.

A soil sample collected from GP4-1 (3-5 feet) was submitted to Microvision Laboratories for Microscopic Analysis for Coal, Coal Ash, and Wood Ash. Results did not indicate the presence of coal, coal ash, or wood ash.

#### 225-227 Beaver Street- Geoprobe Drilling

An apparent dumping area of glass and ash was observed during the wetland sampling event in November 2019. The glass and ash area appeared approximately 1 to 2 feet thick. The disposal area appeared approximately 50 to the west of the wetland edge. Laboratory analysis of soil samples collected from this disposal area identified elevated concentrations of lead. Concentrations of lead were reported in GP3-4 (3-5') at 1,000 mg/Kg and GP3-5 (3-5') at 1,100 mg/Kg within this disposal area. Both soil samples exceeded RCS-1 concentrations for lead. An additional soil sample was submitted to Microvision for analysis for coal or coal ash. The results confirmed the presence of coal or coal ash within the sample.

Laboratory analysis of soil samples collected from a reported former oil changing area identified EPH fractions below RCS-1 standards.



## 6.0 CONCLUSIONS

The Supplemental Phase II Site Investigation was implemented to further delineate areas of potential environmental impact previously identified in the Phase II Limited Site Investigation. The Supplemental Site Investigation further evaluated a portion of the property at 225-227 Beaver Street and the southern part of 240 Beaver Street. Based upon the results of the supplemental soil and sediment testing and site observations, CDW is presenting our conclusions and a summary of the key observations upon which these conclusions are based. From this study, CDW has made the following conclusions:

### 240 Beaver Street

Soil borings were completed in the southern fill area to further delineate the soil conditions in the vicinity of GP1-7 and assess the observed area of past dumping practices.

Soil borings in this area identified fill material containing varying amounts of black fine sand with minor amounts of brick, concrete, gravel and tan to gray sand. This material could represent historic fill if consistent with nearby soil observations; however, after a review of aerial maps, soil borings, personnel interviews, and other sources, this material appears to be unique, and emplaced over a long period of time, which expanded an otherwise steep embankment. A soil sample from this area was submitted to Microvision to identify the potential presence of coal, coal ash or wood ash. The results were negative for those components. Therefore, the presence of heavy metals was not exempt from reporting and will require additional filings under the Massachusetts Contingency Plan.

The presence of PCBs at concentrations that exceeded 50ppm is an illegal use and disposal of this material. The source and extent of the material is unknown. The U.S. EPA regulations would require removal or capping of these materials to eliminate the risk of human exposure to PCBs.

### 225-227 Beaver Street

Hand borings HB-1 through HB-27 were completed within the wetland to the east of the "fly ash" disposal area. The highest concentrations of heavy metals were in HB-5, the southernmost sample location directly adjacent to the original ash disposal area. Metals detected included Antimony, Lead, Silver, and Zinc. Concentrations of lead in multiple locations exceeded the MassDEP sediment screening values, including a wetland location close to an upland glass and ash dumping area. The lead concentration in sediment sample HB-14 exceeded the screening value and is notable for its location beyond the previously known extent of lead within the wetland. Lead concentrations in two sediment sample locations along former railroad tracks at the northeast property boundary also exceeded the screening value.

A Stage II Environmental Risk Characterization would be required to verify whether the current concentrations of heavy metals in the wetland resource area represent a significant risk to the environment if left in place. In addition, a Method 3 risk characterization should be used to evaluate the ash disposal areas, and additional feasible options considered for achieving a Permanent Solution that would allow for future uses. Groundwater was not tested during this investigation; however, prior investigations identified the presence of cadmium in groundwater that exceeded the standards at that time.

The Site is regulated under the MCP and has achieved a Class C Temporary Solution. In accordance with the MCP, 310 CMR 40.1050(4)(b), a Periodic Review of the Temporary Solution shall be conducted

every fifth year after the date of filing the Temporary Solution Statement, until such time that a Permanent Solution Statement is submitted. Such Periodic Review Opinion shall include primarily: an evaluation of the feasibility of implementing one or more permanent solutions for the disposal site, effectiveness of the Temporary Solution(s), and definitive and/or enterprising steps taken to identify, develop and implement a feasible Permanent Solution at the Site. If a Permanent Solution has not been achieved, the next 5-year Periodic Review Opinion is due October 2021.

Soil borings were completed to the northeast of the former residential house to assess the possible man-made mounding used for disposal purposes. Geoprobe drilling of the elevated mound identified the presence of bedrock covered in a loamy soil. Samples for laboratory analysis were not collected and no unusual environmental conditions were noted.

An apparent dumping area of glass and ash was observed during the wetland sampling event in November 2019. The glass and ash area appeared approximately 1 to 2 feet thick. The disposal area appeared approximately 50 to the west of the wetland edge. Two soil samples were submitted from this disposal area. Both soil samples exceeded RCS-1 concentrations for lead. An additional soil sample was submitted to Microvision for analysis for coal or coal ash. The results confirmed the presence of coal or coal ash within the sample. In accordance with the 2016 Historic Fill / Anthropogenic Background Public Comment DRAFT Technical Update, the material cannot be considered anthropogenic background as Historic Fill, as it primarily consists of coal or coal ash that was emplaced in this location. Therefore, the concentrations of lead within the glass and ash dumping area are reportable by the Site owner to the MassDEP within 120 days of their knowledge.

One boring was completed south of the former calf barn where it was reported that motor oil and oil from small engines would be disposed of by allowing the oil to spill onto the ground. One soil boring was completed in December 2019 and identified low levels of C19-C36 aliphatics (120 mg/Kg) and C11 to C22 aromatics (52 mg/Kg). EPH concentration did not exceed RCS-1 Standards and no further action is required at this time.

## **7.0 LIMITATIONS**

This investigation was intended to provide a general assessment of current subsurface conditions and was limited in nature and scope. The findings are limited to the information available at the time of the investigation and the scope of services as defined. The results of the limited subsurface exploration performed on this Site provide the basis for the findings and are representative of conditions at the time of the investigation. No other conclusions, interpretations, or recommendations are contained or implied in this report other than those expressed. Also, CDW makes no warranty, expressed or implied, on the accuracy of the work and information completed by others and upon which CDW has relied to prepare this report. No other use of this report is warranted without the written consent of CDW Consultants, Inc.





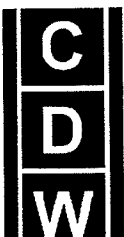
## CDW CONSULTANTS, INC.

225-227 & 240 BEAVER STREET  
WALTHAM, MA

Figure 1 - Site Location Map

SOURCE: MASSGIS

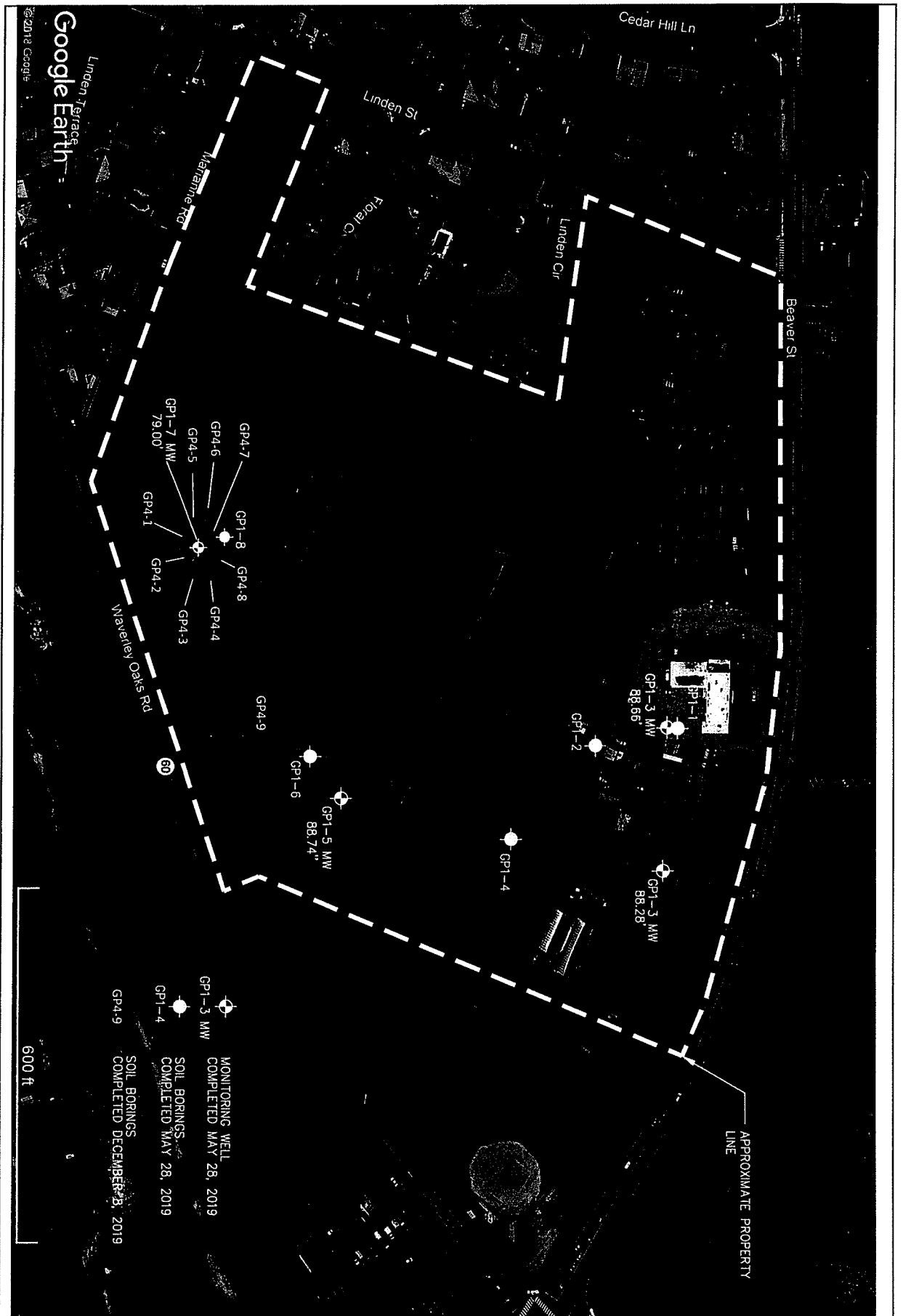
SCALE: 1 inch = 2,000 feet











DATE	REVISION

# 240 BEAVER ST SITE PLAN with SOIL BORINGS

240 BEAVER STREET  
WALTHAM, MA

C  
D  
W

FIGURE 3

1830.0













Table 2  
Hand Borings  
225-227 Beaver Street

PARAMETER		Regulatory Limits		SAMPLING LOCATION																							
SAMPLED	MASTERS'S Required	DATE SAMPLED	Sediment Screening Values	H6-1	H6-5	H6-6	H6-7	H6-8	H6-9	H6-10	H6-11	H6-12	H6-13	H6-14	H6-15	H6-16	H6-17	H6-18	H6-19	H6-20	H6-21	H6-22	H6-23	H6-24	H6-25	H6-26	H6-27
TIME SAMPLED		11/19/2018	11/19/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018	11/20/2018
SW-2540G (% w/w)		10000	11300	8300	1200	530	1200	530	10000	10300	11300	12300	13300	14300	15300	8300	9300	10300	11300	12300	13300	14300	15300	16300	17300	18300	19300
% Solids		66.3	80.3	55.9	53.1	45.7	42.7	44.1	60.5	45.7	76	55.8	56.6	67	46.3	53.7	53.5	70.8	56.8	60.7	59.9						
MCP-14 Metals																											
SW-466 60.000 (mg/kg dry) Metals Digestion																											
ANTIMONY		ND (2.5)	32	ND (2.9)	ND (3.1)	ND (3.6)	ND (3.8)	ND (3.8)	ND (2.7)	ND (3.7)	ND (2.2)	ND (3.0)	ND (2.9)	ND (2.5)	ND (3.5)	ND (3.2)	ND (3.0)	ND (2.4)	ND (6.3)	ND (3.0)	ND (2.7)						
ARSENIC		3.2	11	5.3	9.1	5.3	7	12	4.9	6.3	3.8	8.1	6.8	6.9	7.3	5.4	4.9	5.6	7.4	4.7	4.9						
BARIUM		47	450	45	47	51	54	50	58	54	46	64	56	40	110	70	70	68	85	62	66						
BERYLLIUM		0.57	0.28	0.43	0.47	0.54	0.41	0.51	0.53	0.56	0.38	0.49	0.45	0.31	0.66	0.81	0.81	0.31	0.67	0.76	0.83						
CADMIUM		5.0	29	ND (0.29)	ND (0.31)	ND (0.36)	ND (0.38)	ND (0.38)	ND (0.27)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.29)	0.57	0.42	0.41	0.45	0.45	0.32	0.39	0.4						
CHROMIUM		110	73	14	15	16	16	16	14	15	11	14	13	26	14	13	13	27	14	12	12						
LEAD		130	2700	170	180	160	200	270	120	150	83	87	93	350	71	45	44	200	73	42	42						
NICKEL		49	27	22	22	13	18	19	10	13	7.2	9.8	9.4	16	11	10	10	14	11	8.9	9.3						
SELENIUM		ND (5.0)	ND (4.1)	ND (5.8)	ND (6.2)	ND (7.2)	ND (7.6)	ND (7.7)	ND (5.5)	ND (7.3)	ND (4.4)	ND (6.0)	ND (5.8)	ND (4.9)	ND (7.0)	ND (6.3)	ND (6.1)	ND (4.8)	ND (5.9)	ND (5.4)	ND (5.5)						
SILVER		ND (0.50)	130	ND (0.58)	ND (0.62)	ND (0.72)	ND (0.76)	ND (0.77)	ND (0.55)	ND (0.73)	ND (0.44)	ND (0.60)	ND (0.58)	ND (0.49)	ND (0.70)	ND (0.63)	ND (0.61)	ND (0.48)	ND (0.59)	ND (0.54)	ND (0.55)						
THALLIUM		ND (2.5)	ND (2.1)	ND (2.9)	ND (3.1)	ND (3.6)	ND (3.8)	ND (3.8)	ND (2.7)	ND (3.7)	ND (2.2)	ND (3.0)	ND (2.9)	ND (2.5)	ND (3.5)	ND (3.2)	ND (3.0)	ND (2.4)	ND (6.3)	ND (3.0)	ND (2.7)						
VANADIUM		34	27	41	47	49	42	66	38	54	26	37	37	35	38	41	41	31	45	37	38						
ZINC		460	5100	63	64	78	140	110	59	73	45	70	60	110	63	91	90	100	53	79	84						
SW-466 70.7218 (mg/kg dry) Metals Digestion																											
MERCURY		0.15	0.9	0.21	0.3	0.22	0.22	0.29	0.11	0.23	0.091	0.11	0.12	0.11	0.1	0.11	0.11	0.095	0.21	0.11	0.12						
SVOC																											
BZTODC (mg/kg dry)																											
ACENAPHTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
ACENAPHTHYLENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
ACETOPHENONE		ND (0.21)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
ANILINE		ND (0.21)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
ANTHRACENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BEZONINE		ND (0.10)	ND (0.082)	ND (0.10)	ND (0.12)	ND (0.14)	ND (0.15)	ND (0.15)	ND (0.11)	ND (0.14)	ND (0.086)	ND (0.12)	ND (0.11)	ND (0.098)	ND (0.14)	ND (0.12)	ND (0.11)	ND (0.091)	ND (0.13)	ND (0.11)	ND (0.11)						
BENZOLANTHRACENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOFLOUORANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)	ND (0.30)	ND (0.25)	ND (0.36)	ND (0.32)	ND (0.30)	ND (0.23)	ND (6.3)	ND (3.0)	ND (2.7)						
BENZOCALICANTHENE		ND (0.26)	ND (0.21)	ND (0.30)	ND (0.32)	ND (0.36)	ND (0.39)	ND (0.38)	ND (0.28)	ND (0.37)	ND (0.22)	ND (0.30)</															

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	4,6-DINITRO-2-METHYLPHENOL	2,4-DINITROPHENOL	2,6-DINITROTOLUENE	DI-4-CYTOPHTHALATE	2-DIPHENYLDIPHANE (AZOBENZENE)	FLUORENE	HEXACHLOROBENZENE	HEXACHLOROCYCLOPENTADIENE	HEXACHLOROCYCLOHEPTADIENE	HEXACHLOROPHTHALENE	INDENOL(1,2,3-CO)PHTHALENE	ISOPHTHALENE	1-METHYLAZARPHATHALENE	2-METHYLAZARPHATHALENE	O-CRESOL	M-P-CRESOL	NAPHTHALENE	2-NITROANILINE	3-NITROANILINE	4-NITROANILINE	NITROBENZENE	2-NITROPHENOL	4-NITROPHENOL	N-NITROSODIMETHYLAMINE	N-NITROSODIETHYLAMINE	N-NITROSODI-N-PROPYLAMINE	PENTACHLORONITROBENZENE	PENTACHLOROPHTHALENE	PHENANTHRENE	PHENOL	PIRENE	1,2,4,5-TETRACHLOROBENZENE	1,2,4,6-TETRACHLOROPHTHALENE	2,4,6-TRICHLOROPHTHALENE	2,4,6-TRICHLOROPHTHALENE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.73)	ND (0.44)	ND (0.61)	ND (0.59)	ND (0.50)	ND (0.72)	ND (0.65)	ND (0.63)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.51)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND (0.73)	ND (0.79)	ND (0.75)	ND (0.63)	ND (0.72)	ND (0.65)	ND (0.47)	ND (0.59)	ND (0.55)	ND (0.56)	ND (0.51)	ND (0.42)	ND (0.60)	ND (0.64)	ND

1. ND = Not detected above the lab reporting limits shown in parenthesis.  
2. ~ = No Method 1 Standard or UCL available

3. Grey shaded values exceed the MCP Reportable Concentrations 1 (RC5-1).

**3. Grey shaded values exceed the MCP Report**

3. Grey shaded values exceed the MCP Reportable Concentrations 1 (RC5-1).





# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 2 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.  
 BORING ID: GP4-9  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	24"	0	gray graded base with gravel, silt, fine sand tan to gray fine SAND, trace gravel with broken rock; dry End of Boring at 2 feet	
					0.0		
-1					2		
			2'				
-2							
-3							
-4							
-5							
-6							
-7							
-8							
-9							
-10							
-11							
-12							
-13							
-14							
-15							
-16							
-17							
-18							
-19							
-20							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater	Measuring Point	Overburden: Fill			
				Rock: NA			
				Well Depth: NA			
				Boring: 2'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.

BORING ID: GP4-8  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	48"	0	black asphalt and graded base		
-1					0.0	tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)		
-2					2			
-3					0.0	tan to gray fine to silty fine SAND, little medium sand; dry (FILL)		
-4					4			
-5	S2		5'	40"	0.9	black fine to silty fine SAND, trace medium sand, with wood; dry (FILL)		
-6					6			
-7					1.9			
-8					8			
-9					0.0			
-10	S3		10'	48"	10			
-11					0.8			black fine to silty fine SAND, trace medium sand, trace coarse sand; moist to wet (FILL)
-12					12			
-13					0.7			
-14					14			
-15			15'			End of Boring at 15 feet; No Refusal		
-16								
-17								
-18								
-19								
-20								
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand			
					Rock: NA			
					Well Depth: NA			
					Boring: 15'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.

BORING ID: GP4-7  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0	black asphalt and graded base		
-1					0.0	tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)		
-2					2			
-3					1.3	tan to gray fine to silty fine SAND, little medium sand; dry		
-4					4			
-5	S2		5'	48"	1.1	black fine to silty fine SAND, trace medium sand, with wood; dry (FILL)		
-6					6			
-7					0.9			
-8					8			
-9					0.3			
-10	S3		10'	60"	10			see above with 6" concrete layer (FILL)
-11					2.6			
-12					12			black fine to silty fine SAND, trace medium sand, trace coarse sand; moist to wet
-13					1.3			
-14					14			
-15			15'			End of Boring at 15 feet; No Refusal		
-16								
-17								
-18								
-19								
-20								
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand			
					Rock: NA			
					Well Depth: NA			
					Boring: 15'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.:

BORING ID: GP4-6  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram		
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery					
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)			
					0.0				
-1					2				
					2				
-2					2	tan to gray fine to silty fine SAND, little medium sand with wood and glass; dry (FILL)			
					0.0				
-3					4				
					4				
-4					4	gray fine to silty fine SAND, trace medium sand with wood and glass; moist (FILL)			
			5'		0.1				
-5	S2		5'	48"	6				
					6				
-6					0.0				
					8				
-7					8				
					1.6				
-8					10			gray to black fine SAND, little gravel, trace silt with wood; moist (FILL)	
			10'		10				
-10	S3		10'	45"	0.0				
					12				
-12					12	Approximate Water Table			
					0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet			
-13					14				
									End of Boring at 15 feet; No Refusal
-14									
			15'						
-15									
-16									
-17									
-18									
-19									
-20									
Groundwater Measurements						Summary			
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand				
					Rock: NA				
					Well Depth: NA				
					Boring: 15'				

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.  
 BORING ID: GP4-5  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)	
-1					0.0		
-2					2		
-3					2		
-4					0.9	tan to gray fine to silty fine SAND, little medium sand with wood and glass; dry (FILL)	
-5					4		
-6					4		
-7			5'		4		
-8					0.1		
-9	S2		5'	48"	6		
-10					6	dark fine to silty fine SAND, trace medium sand with wood and glass; moist to dry (FILL)	
-11					0.6		
-12					8		
-13					8		
-14					0.4		
-15			10'		10		
-16	S3		10'	40"	10	gray to black fine SAND, little gravel, trace silt with wood; moist (FILL)	
-17					0.0		
-18					12		
-19					12	Approximate Water Table ----- gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet	
-20					0.1		
-21					14		
-22			15'			End of Boring at 15 feet; No Refusal	
-23							
-24							
-25							
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# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.:  
 BORING ID: GP4-4  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)	
					0.0		
-1					2		
-2					2	tan to gray fine to silty fine SAND, little medium sand with wood and glass; dry (FILL)	
					0.0		
-3					4		
-4					4	black fine to silty fine SAND, trace medium sand with broken glass, asphalt pieces, concrete pieces, etc. (FILL)	
			5'		0.9		
-5	S2		5'	48"	6		
-6					6	gray to black fine SAND, little gravel, trace silt with wood; moist (FILL)	
					1.2		
-7					8		
-8					8	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet	
					0.7		
-9			10'		10		
-10	S3		10'	40"	10	End of Boring at 15 feet; No Refusal	
					0.2		
-11					12		
-12					12	Approximate Water Table	
					0.1		
-13					14		
-14						End of Boring at 15 feet; No Refusal	
			15'				
-15							
-16							
-17							
-18							
-19							
-20							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand		
					Rock: NA		
					Well Depth: NA		
					Boring: 15'		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.:

BORING ID: GP4-3  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)	
-1					0.0		
					2		
-2					2		
					0.0		
-3					4		
-4					4		
			5'		0.9		
-5	S2		5'	48"	6		
-6					6		
					1.2		
-7					8		
-8					8		
					0.7		
-9			10'		10		
-10	S3		10'	40"	10		
					0.2		
-11					12		
-12					12		
					0.1		
-13					14		
-14							
			15'				
-15							
-16							
-17							
-18							
-19							
-20							
Groundwater Measurements						Summary	
Date		Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand	
						Rock: NA	
						Well Depth: NA	
						Boring: 15'	

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.

BORING ID: GP4-2  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)	
-1					0.1		
-2					2		
-3					2		
-4					0.0		
-5	S2		5'	48"	4		
-6					4		
-7					0.1		
-8					6		
-9					6		
-10					0.1		
-11					8		
-12					8		
-13					0.3		
-14			10'		10		
-15	S3		10'	60"	10		
-16					0.9		
-17					12		
-18					12		
-19					0.6		
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# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.  
 BORING ID: GP4-1  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)	
-1					0.1		
-2					2		
-3					2		
-4					0.0		
-5					4		
-6					4		
-7			5'		0.1		
-8	S2		5'	48"	6		
-9					6		
-10					0.1		
-11					8		
-12					8		
-13					0.3		
-14			10'		10		
-15	S3		10'	60"	10		
-16					0.9		
-17					12		
-18					12		
-19					0.6		
-20					14		
-21							
-22			15'				
-23	S4		15'				
-24							
-25							
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**TEST BORING LOG**

CDW Consultants, Inc.

Project No.: 1830  
Total Depth: 2 ft  
Date Started: 12/9/2019  
Casing ID:  
Remarks: 6610 DT Geoprobe

Client: City of Waltham  
Location: 240 Beaver St  
Completed: 12/9/2019  
Ground El.

BORING ID: GP3-1  
Logged By: AMS  
Contractor: Crawford  
Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	18"	0.0	brown loamy soil	
-1						tan to brown loamy soil with brown fine SAND	
-2						End of Boring at 2 feet; Refusal at 2 ft	
-3							
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Groundwater Measurements				Summary	
Date	Time	Depth to Groundwater	Measuring Point	Overburden:	Loamy soil
				Rock:	NA
				Well Depth:	NA
				Boring:	2 ft

**TEST BORING LOG**

CDW Consultants, Inc.

Project No.: 1830  
Total Depth: 2 ft  
Date Started: 12/9/2019  
Casing ID:  
Remarks: 6610 DT Geoprobe

Client: City of Waltham  
Location: 240 Beaver St  
Completed: 12/9/2019  
Ground El.  
BORING ID: GP3-2  
Logged By: AMS  
Contractor: Crawford  
Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	18"	0.0	brown loamy soil	
-1						tan to brown loamy soil with brown fine SAND	
-2						End of Boring at 2 feet; Refusal at 2 ft	
-3							
-4							
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<b>Groundwater Measurements</b>						<b>Summary</b>	
Date	Time	Depth to Groundwater	Measuring Point	Overburden: Loamy soil			
				Rock: NA			
				Well Depth: NA			
				Boring: 2 ft			

**TEST BORING LOG**

CDW Consultants, Inc.

Project No.: 1830  
Total Depth: 2 ft  
Date Started: 12/9/2019  
Casing ID:  
Remarks: 6610 DT Geoprobe

Client: City of Waltham  
Location: 240 Beaver St  
Completed: 12/9/2019  
Ground El.  
BORING ID: GP3-3  
Logged By: AMS  
Contractor: Crawford  
Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	18"	0.0	brown loamy soil	
-1						tan to brown loamy soil with brown fine SAND	
-2						End of Boring at 2 feet; Refusal at 2 ft	
-3							
-4							
-5							
-6							
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-19							
-20							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater	Measuring Point	Overburden:	Loamy soil		
				Rock:	NA		
				Well Depth:	NA		
				Boring:	2 ft		

**TEST BORING LOG**

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 9 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.

BORING ID: GP3-4  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	30"	0.0	4" Leaf Litter	
-1					1	broken glass pile	
-2					0.1		
-3					3	tan to brown fine to silty fine SAND, trace gravel, glass, wood, possible coal ash	
-4					3		
-5					1.2	black silty fine SAND, little coarse sand, trace gravel and wood, broken pieces of coal	
-6			5'		5		
				48"	5		
-7					0.8		
-8					7	tan to brown silty fine SAND, little medium sand, trace gravel: moist to wet	
-9					7		
					0.2		
-10					9		
-11							
-12							
-13							
-14							
-15							
-16							
-17							
-18							
-19							
-20							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater		Measuring Point	Overburden:	Fill, Sand	
					Rock:	NA	
					Well Depth:	NA	
					Boring:	9 ft	

**TEST BORING LOG**

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 9 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.

BORING ID: GP3-5  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	30"	0.0	4" Leaf Litter	
-1					1	broken glass pile	
-2					0.0	tan to brown fine to silty fine SAND, trace gravel, glass, wood, possible coal ash	
-3					3		
-4					3		
-4					1.7	tan to brown silty fine SAND, little coarse sand, trace gravel and wood, broken pieces of glass	
-5			5'		5		
-5			5'	50"	5	tan to brown silty fine SAND, little medium sand, trace gravel: moist to wet	
-6					0.1		
-6					7		
-7					7		
-8					0.1		
-8					9	End of Boring at 9 feet; No Refusal	
-9							
-10			10'				
-11							
-12							
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-20							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater		Measuring Point	Overburden:	Fill, Sand	
					Rock:	NA	
					Well Depth:	NA	
					Boring:	9 ft	

**TEST BORING LOG**

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 9 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 225-227 Beaver St  
 Completed: 5/28/2019  
 Ground El. \_\_\_\_\_

BORING ID: GP2-3  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0.0	brown loamy soil  tan to brown fine SAND, trace coarse sand with gravel; dry  brown fine SAND, 8" coarse sand layer, gray gravel with silt lenses; dry		
-1					1			
-2					0.0			
-3					3			
-4					3			
-5					0.0			
-6			5'		5			
-7	S2		5'	36"	5			
-8					0.0			
-9					7			
-10					7			
-11					0.0			
-12					9			
-13								
-14								
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-20								
Note: 3 additional attempts did not drill past 9 feet								
Groundwater Measurements								Summary
Date	Time	Depth to Groundwater		Measuring Point		Overburden: Fill; Sand		
						Rock: NA		
						Well Depth: NA		
						Boring: 9 ft		

# TEST BORING LOG

**CDW Consultants, Inc.**

Project No.: 1830  
Total Depth: 9 ft  
Date Started: 5/28/2019  
Casing ID:  
Remarks: 6610 DT Geoprobe

Client: City of Waltham  
Location: 225-227 Beaver St  
Completed: 5/28/2019  
Ground El. \_\_\_\_\_

BORING ID: **GP2-2**  
 Logged By: **AMS**  
 Contractor: **Crawford**  
 Sheet #: **1**

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0.0	brown loamy soil  tan to brown fine SAND, trace coarse sand with gravel; dry  See Above  brown fine SAND, trace medium sand with gravel and silt lenses; dry		
-1					1			
					0.0			
-2					3			
-3					3			
					0.0			
-4			5'		5			
-5	S2		5'	36"	5			
					0.0			
-6					7			
-7					7			
					0.0			
-8					9			
-9			10'			End of Boring at 8 feet; Refusal at 9 ft		
-10								
-11								
-12								
-13								
-14								
-15								
-16								
-17								
-18								
-19								
-20								
						Note: 3 additional attempts did not drill past 9 feet		

Groundwater Measurements				Summary	
Date	Time	Depth to Groundwater	Measuring Point	Overburden:	Fill; Sand
				Rock:	NA
				Well Depth:	NA
				Boring:	9 ft



# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 8 ft  
 Date Started: 10/10/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 225-227 Beaver St  
 Completed: 5/28/2019  
 Ground El.

BORING ID: GP2-1  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0.0	brown loamy soil  tan to brown fine SAND, trace coarse sand with gravel; dry  See Above  brown fine SAND, trace medium sand with gravel and silt lenses; dry	
-1					1		
-2					0.0		
-3					3		
-4					3		
-5					0.0		
-6			5'		5		
-7	S2		5'	36"	5		
-8					0.0		
-9					7		
-10					7		
-11					0.0		
-12					9		
-13							
-14							
-15							
-16							
-17							
-18							
-19							
-20							
Note: 3 additional attempts did not get past 9 feet							
Groundwater Measurements					Summary		
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand		
					Rock: NA		
					Well Depth: NA		
					Boring: 8 ft		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.:

BORING ID: GP1-8  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0	black asphalt and graded base		
-1					0.0	tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)		
					2			
-2					2			
					0.8	tan to gray fine to silty fine SAND, little medium sand; dry		
-3					4			
-4					4			
			5'		1.1			
-5	S2		5'	48"	6			
-6					6			
					0.9			black fine to silty fine SAND, trace medium sand, with wood and glass; dry
-7					8			
-8					8			
					1.6			
-9			10'		10			
-10	S3		10'	60"	10	black fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet		
					2.1			
-11					12			
-12					12			
					1.3			
-13					14			
-14					14			
			15'		0.7			
-15	S4		15'		16			
-16					16			
					0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet		
-17					18			
-18					18			
					0.0			
-19			20'		20			
-20						End of Boring at 20 feet; No Refusal		
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand			
					Rock: NA			
					Well Depth: NA			
					Boring: 20'			

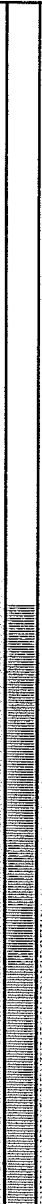
# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.

BORING ID: GP1-7MW  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram		
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery					
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)			
-1					0.1				
-2					2				
-3					2	tan to gray fine to silty fine SAND, little medium sand with wood and glass; dry			
-4					0.0				
-5					4				
-6					4				
-7			5'		0.1				
-8	S2		5'	48"	6				
-9					6				
-10					0.1				
-11					8				
-12					8				
-13					0.3	See Above			
-14			10'		10				
-15	S3		10'	60"	10				
-16					0.9				
-17					12				
-18					12			Approximate Water Table	
-19					0.6			gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet	
-20					14				
-21					14				
-22			15'		0.1				
-23	S4		15'		16				
-24					16	gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet			
-25					0.0				
-26					18				
-27					18				
-28					0.0				
-29			20'		20				
-30						End of Boring at 20 feet; No Refusal			
Groundwater Measurements						Summary			
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand				
					Rock: NA				
					Well Depth: NA				
					Boring: 20'				

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.

BORING ID: GP1-6  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1


Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0.0	black asphalt and graded base  tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)	
-1					1		
-2					0.0		
-3					3	tan to gray fine to silty fine SAND, little medium sand; dry	
-4					3		
-5					0.0		
-6			5'		5		
-7	S2		5'	48"	5		
-8					0.0		
-9					7		
-10					7		
-11					0.0		
-12					9		
-13					9		
-14			10'		0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet	
-15	S3		10'	60"	0.1		
-16					11		
-17					11		
-18					0.1		
-19					13		
-20					13		
-21					0.0		
-22			15'		15		
-23	S4		15'		15		
-24					0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
-25					17		
-26					17		
-27					0.0		
-28					0.0		
-29			20'		20		
-30						End of Boring at 20 feet; No Refusal	
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater	Measuring Point	Overburden: Fill; Sand			
				Rock: NA			
				Well Depth: NA			
				Boring: 20'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.  
 BORING ID: GP1-5MW  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0.0	black asphalt and graded base  tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)		
-1					1			
-2					0.0			
-3					3	tan to gray fine to silty fine SAND, little medium sand; dry		
-4					3			
-5					0.0			
-6			5'		5			
-7	S2		5'	48"	5			
-8					0.0			
-9					7			
-10					7			
-11					0.0			
-12					9			
-13					9			
-14			10'		0.1			
-15	S3		10'	60"	11	gray fine to silty fine SAND, trace medium sand, with pebbles; dry		
-16					11			
-17					0.1			
-18					13			
-19					13			
-20					0.0			
-21					15			
-22	S4		15'		15			
-23					0.1			
-24					17			
-25					17			
-26					0.0			
-27					0.0			
-28					20'			
-29					20			
-30						End of Boring at 20 feet; No Refusal		
-31								
Groundwater Measurements							Summary	
Date	Time	Depth to Groundwater		Measuring Point		Overburden: Fill; Sand		
						Rock: NA		
						Well Depth: NA		
						Boring: 20'		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.

BORING ID: GP1-4  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0.0	black asphalt and graded base  tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)		
-1					1			
-2					0.0			
-3					3	tan to gray fine to silty fine SAND, little medium sand; dry		
-4					3			
-5					0.0			
-6			5'		5			
-7	S2		5'	48"	5			gray fine to silty fine SAND, trace medium sand, with pebbles; dry
-8					0.0			
-9					7			
-10					7			
-11					0.0			
-12					9			
-13					9			
-14			10'		0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet		
-15	S3		10'	60"	11			
-16					11			
-17					0.1			
-18					13			
-19					13			
-20					0.0			
-21					15		gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
-22	S4		15'		15			
-23					0.1			
-24					17			
-25					17			
-26					0.0			
-27					20			
-28			20'			End of Boring at 20 feet; No Refusal		
-29								
-30								
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand			
					Rock: NA			
					Well Depth: NA			
					Boring: 20'			


# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.

BORING ID: GP1-3MW  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0.0	black asphalt and graded base	
-1					1	tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)	
-2					0.0		
					3	tan to gray fine to silty fine SAND, little medium sand; dry	
-3					3		
					0.0		
-4							
			5'		5		
-5	S2		5'	48"	5		
					0.0		
-6					7		
-7					7		
					0.0		
-8					9		
-9					9		
			10'		0.1		
-10	S3		10'	60"	11		
-11					11		
					0.1		
-12					13		
-13					13		
					0.0		
-14							
			15'		15		
-15	S4		15'		15		
					0.1		
-16					17		
-17					17		
					0.0		
-18							
-19							
			20'		20		
-20						End of Boring at 20 feet; No Refusal	
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand		
					Rock: NA		
					Well Depth: NA		
					Boring: 20'		

## Groundwater Measurements

## Summary

Date	Time	Depth to Groundwater	Measuring Point	Overburden: Fill; Sand
				Rock: NA
				Well Depth: NA
				Boring: 20'

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.

BORING ID: GP1-2  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery					
0	S1		0'	40"	0.0	black asphalt and graded base  tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)			
-1					1				
-2					0.0				
-3					3	tan to gray fine to silty fine SAND, little medium sand; dry			
-4					3				
-5					0.0				
-6			5'		5				
-7	S2		5'	48"	5				
-8					0.0				
-9					7			gray fine to silty fine SAND, trace medium sand, with pebbles; dry	
-10					7				
-11					0.0				
-12					9				
-13					9				
-14			10'		0.1				
-15	S3		10'	60"	11				
-16					11				
-17					0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet			
-18					13				
-19					13				
-20					0.0				
-21					0.0				
-22			15'		15				
-23	S4		15'		15				
-24					0.1				
-25					17				
-26					17			gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
-27					0.0				
-28									
-29									
-30			20'		20				
-31						End of Boring at 20 feet; No Refusal			
Groundwater Measurements								Summary	
Date	Time	Depth to Groundwater		Measuring Point		Overburden: Fill; Sand			
						Rock: NA			
						Well Depth: NA			
						Boring: 20'			



# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.

BORING ID: GP1-1  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0.0	black asphalt and graded base  tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)	
-1					1		
-2					0.0		
					3	tan to gray fine to silty fine SAND, little medium sand; dry  gray fine to silty fine SAND, trace medium sand, with pebbles; dry  gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet  gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
-3					3		
					0.0		
-4					5		
			5'		5		
-5	S2		5'	48"	5		
					0.0		
-6					7		
-7					7		
					0.0		
-8					9		
-9					9		
			10'		0.1		
-10	S3		10'	60"	11		
					11		
-11					11		
					0.1		
-12					13		
					13		
-13					0.0		
-14					15		
			15'		15		
-15	S4		15'		15		
					0.1		
-16					17		
-17					17		
					0.0		
-18							
-19							
			20'		20		
-20						End of Boring at 20 feet; No Refusal	
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater	Measuring Point	Overburden: Fill; Sand			
				Rock: NA			
				Well Depth: NA			
				Boring: 20'			





---

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

December 16, 2019

Alan Sundquist  
CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760

Project Location: 225-227 Beaver St, Waltham, MA  
Client Job Number:  
Project Number: 1830  
Laboratory Work Order Number: 19L0396

Enclosed are results of analyses for samples received by the laboratory on December 10, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Michelle Koch". The signature is written in a cursive, flowing style.

Michelle M. Koch  
Project Manager

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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760  
ATTN: Alan Sundquist

REPORT DATE: 12/16/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1830

## ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19L0396

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 225-227 Beaver St, Waltham, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
GP 3-4 (3-5')	19L0396-01	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8270D-E	
GP 3-5 (3-5')	19L0396-02	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8270D-E	
GP 3-6 (2-4')	19L0396-03	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8270D-E	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

**MADEP-EPH-04-1.1****Qualifications:****L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

**Analyte & Samples(s) Qualified:****n-Nonane**

B248185-BS1

**SW-846 8270D-E****Qualifications:****V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:****Pyrene**


19L0396-01[GP 3-4 (3-5)], 19L0396-02[GP 3-5 (3-5)], 19L0396-03[GP 3-6 (2-4)], B248158-BLK1, B248158-BS1, B248158-BSD1, S043694-CCV1

**MADEP-EPH-04-1.1**

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C 11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington

Technical Representative



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-4 (3-5')

Sampled: 12/9/2019 13:30

Sample ID: 19L0396-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Acetophenone	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Aniline	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Benzo(a)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Benzo(a)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Benzo(b)fluoranthene	0.23	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Bis(2-chloroethoxy)methane	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Bis(2-chloroethyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Bis(2-chloroisopropyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
4-Bromophenylphenylether	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Butylbenzylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
4-Chloroaniline	ND	0.76	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
2-Chloronaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
2-Chlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Dibenzofuran	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Di-n-butylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
1,2-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
1,3-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
1,4-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
2,4-Dichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Diethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
2,4-Dimethylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Dimethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
2,4-Dinitrophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
2,4-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
2,6-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Di-n-octylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Fluoranthene	0.33	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Hexachlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Hexachlorobutadiene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Hexachloroethane	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Isophorone	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-4 (3-5')

Sampled: 12/9/2019 13:30

Sample ID: 19L0396-01

Sample Matrix: Soil

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
3/4-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Nitrobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
2-Nitrophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
4-Nitrophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Pentachlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Phenanthrene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Phenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
Pyrene	0.31	0.20	mg/Kg dry	1	V-05	SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
1,2,4-Trichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
2,4,5-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR
2,4,6-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:26	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	57.3	30-130	12/12/19 16:26
Phenol-d6	56.4	30-130	12/12/19 16:26
Nitrobenzene-d5	51.0	30-130	12/12/19 16:26
2-Fluorobiphenyl	65.8	30-130	12/12/19 16:26
2,4,6-Tribromophenol	54.9	30-130	12/12/19 16:26
p-Terphenyl-d14	62.7	30-130	12/12/19 16:26



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-4 (3-5')

Sampled: 12/9/2019 13:30

Sample ID: 19L0396-01

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/16/19 13:01	MJH
Arsenic	11	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 19:54	TBC
Barium	140	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 19:54	TBC
Beryllium	0.31	0.20	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 19:54	TBC
Cadmium	0.63	0.20	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 19:54	TBC
Chromium	21	0.40	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 19:54	TBC
Lead	1000	0.59	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 19:54	TBC
Mercury	0.57	0.030	mg/Kg dry	1		SW-846 7471B	12/11/19	12/12/19 11:46	CJV
Nickel	17	0.40	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 19:54	TBC
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 19:54	TBC
Silver	0.55	0.40	mg/Kg dry	1		SW-846 6010D	12/12/19	12/16/19 13:01	MJH
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 19:54	TBC
Vanadium	41	0.79	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 19:54	TBC
Zinc	310	0.79	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 19:54	TBC

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Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-4 (3-5')

Sampled: 12/9/2019 13:30

Sample ID: 19L0396-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.4		% Wt	1		SM 2540G	12/11/19	12/11/19 15:03	adb



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Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-5 (3-5')

Sampled: 12/9/2019 14:15

Sample ID: 19L0396-02

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Acetophenone	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Aniline	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Anthracene	0.48	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Benzo(a)anthracene	2.2	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Benzo(a)pyrene	2.0	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Benzo(b)fluoranthene	2.4	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Benzo(g,h,i)perylene	0.82	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Benzo(k)fluoranthene	0.90	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Bis(2-chloroethoxy)methane	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
4-Bromophenylphenylether	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Butylbenzylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
4-Chloroaniline	ND	0.77	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
2-Chloronaphthalene	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
2-Chlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Chrysene	2.1	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Dibenz(a,h)anthracene	0.21	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Dibenzofuran	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Di-n-butylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
1,2-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
1,3-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
1,4-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
2,4-Dichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Diethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
2,4-Dimethylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Dimethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
2,4-Dinitrophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
2,4-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
2,6-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Di-n-octylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Fluoranthene	4.4	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Hexachlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Hexachlorobutadiene	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Hexachloroethane	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Indeno(1,2,3-cd)pyrene	1.1	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Isophorone	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-5 (3-5')

Sampled: 12/9/2019 14:15

Sample ID: 19L0396-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
3/4-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Nitrobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
2-Nitrophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
4-Nitrophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Pentachlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Phenanthrene	1.7	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Phenol	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
Pyrene	3.5	0.20	mg/Kg dry	1	V-05	SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
2,4,5-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR
2,4,6-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 16:51	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	53.7	30-130	12/12/19 16:51
Phenol-d6	57.3	30-130	12/12/19 16:51
Nitrobenzene-d5	49.7	30-130	12/12/19 16:51
2-Fluorobiphenyl	67.6	30-130	12/12/19 16:51
2,4,6-Tribromophenol	62.5	30-130	12/12/19 16:51
p-Terphenyl-d14	60.3	30-130	12/12/19 16:51

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-5 (3-5')

Sampled: 12/9/2019 14:15

Sample ID: 19L0396-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/16/19 13:07	MJH
Arsenic	19	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:01	TBC
Barium	280	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:01	TBC
Beryllium	0.42	0.20	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:01	TBC
Cadmium	1.1	0.20	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:01	TBC
Chromium	18	0.40	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:01	TBC
Lead	1100	0.60	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:01	TBC
Mercury	2.5	0.15	mg/Kg dry	5		SW-846 7471B	12/11/19	12/12/19 12:48	CJV
Nickel	11	0.40	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:01	TBC
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:01	TBC
Silver	0.70	0.40	mg/Kg dry	1		SW-846 6010D	12/12/19	12/16/19 13:07	MJH
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:01	TBC
Vanadium	29	0.80	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:01	TBC
Zinc	540	0.80	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:01	TBC



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Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-5 (3-5')

Sampled: 12/9/2019 14:15

Sample ID: 19L0396-02

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.8		% Wt	1		SM 2540G	12/11/19	12/11/19 15:03	adb

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-6 (2-4')

Sampled: 12/9/2019 15:00

Sample ID: 19L0396-03

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Acetophenone	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Aniline	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Benzo(a)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Benzo(a)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Benzo(b)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Bis(2-chloroethoxy)methane	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Bis(2-chloroethyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Bis(2-chloroisopropyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
4-Bromophenylphenylether	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Butylbenzylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
4-Chloroaniline	ND	0.77	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
2-Chloronaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
2-Chlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Dibenzofuran	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Di-n-butylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
1,2-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
1,3-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
1,4-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
2,4-Dichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Diethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
2,4-Dimethylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Dimethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
2,4-Dinitrophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
2,4-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
2,6-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Di-n-octylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Hexachlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Hexachlorobutadiene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Hexachloroethane	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Isophorone	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR



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Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-6 (2-4')

Sampled: 12/9/2019 15:00

Sample ID: 19L0396-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
3/4-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Nitrobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
2-Nitrophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
4-Nitrophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Pentachlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Phenanthrene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Phenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
Pyrene	ND	0.20	mg/Kg dry	1	V-05	SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
1,2,4-Trichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
2,4,5-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR
2,4,6-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/12/19 17:16	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	64.1	30-130	12/12/19 17:16
Phenol-d6	65.6	30-130	12/12/19 17:16
Nitrobenzene-d5	57.5	30-130	12/12/19 17:16
2-Fluorobiphenyl	80.3	30-130	12/12/19 17:16
2,4,6-Tribromophenol	71.6	30-130	12/12/19 17:16
p-Terphenyl-d14	68.9	30-130	12/12/19 17:16



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Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-6 (2-4')

Sampled: 12/9/2019 15:00

Sample ID: 19L0396-03

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
C19-C36 Aliphatics	120	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Unadjusted C11-C22 Aromatics	52	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
C11-C22 Aromatics	52	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
1-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/12/19	12/16/19 12:31	RMW

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	82.3	40-140	12/16/19 12:31
o-Terphenyl (OTP)	80.3	40-140	12/16/19 12:31
2-Bromonaphthalene	96.4	40-140	12/16/19 12:31
2-Fluorobiphenyl	101	40-140	12/16/19 12:31



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Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-6 (2-4')

Sampled: 12/9/2019 15:00

Sample ID: 19L0396-03

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/16/19 13:13	MJH
Arsenic	ND	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:07	TBC
Barium	12	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:07	TBC
Beryllium	ND	0.20	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:07	TBC
Cadmium	ND	0.20	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:07	TBC
Chromium	4.4	0.40	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:07	TBC
Lead	8.0	0.60	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:07	TBC
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	12/11/19	12/12/19 11:50	CJV
Nickel	3.7	0.40	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:07	TBC
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:07	TBC
Silver	ND	0.40	mg/Kg dry	1		SW-846 6010D	12/12/19	12/16/19 13:13	MJH
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:07	TBC
Vanadium	7.8	0.80	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:07	TBC
Zinc	12	0.80	mg/Kg dry	1		SW-846 6010D	12/12/19	12/13/19 20:07	TBC



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Project Location: 225-227 Beaver St, Waltham, MA

Sample Description:

Work Order: 19L0396

Date Received: 12/10/2019

Field Sample #: GP 3-6 (2-4')

Sampled: 12/9/2019 15:00

Sample ID: 19L0396-03

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.3		% Wt	1		SM 2540G	12/11/19	12/11/19 15:03	adb

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### Sample Extraction Data

Prep Method: SW-846 3546-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19L0396-03 [GP 3-6 (2-4'')]	B248185	20.7	2.00	12/12/19

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
19L0396-01 [GP 3-4 (3-5'')]	B248096	12/11/19
19L0396-02 [GP 3-5 (3-5'')]	B248096	12/11/19
19L0396-03 [GP 3-6 (2-4'')]	B248096	12/11/19

Prep Method: SW-846 3050B-SW-846 6010D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19L0396-01 [GP 3-4 (3-5'')]	B248270	1.48	50.0	12/12/19
19L0396-02 [GP 3-5 (3-5'')]	B248270	1.50	50.0	12/12/19
19L0396-03 [GP 3-6 (2-4'')]	B248270	1.49	50.0	12/12/19

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19L0396-01 [GP 3-4 (3-5'')]	B248100	0.594	50.0	12/11/19
19L0396-02 [GP 3-5 (3-5'')]	B248100	0.590	50.0	12/11/19
19L0396-03 [GP 3-6 (2-4'')]	B248100	0.616	50.0	12/11/19

Prep Method: SW-846 3546-SW-846 8270D-E

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19L0396-01 [GP 3-4 (3-5'')]	B248158	30.6	1.00	12/11/19
19L0396-02 [GP 3-5 (3-5'')]	B248158	30.8	1.00	12/11/19
19L0396-03 [GP 3-6 (2-4'')]	B248158	30.7	1.00	12/11/19

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248158 - SW-846 3546										
Blank (B248158-BLK1)				Prepared: 12/11/19 Analyzed: 12/12/19						
Accenaphthene	ND	0.17	mg/Kg wet							
Accenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
4-Chloroaniline	ND	0.65	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
Chlorophenol	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.65	mg/Kg wet							
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
1-Methylphthalene	ND	0.17	mg/Kg wet							
1-Methylpseudophthalene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.65	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248158 - SW-846 3546										
Blank (B248158-BLK1)				Prepared: 12/11/19 Analyzed: 12/12/19						
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							V-05
Pyridine	ND	0.34	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	5.18		mg/Kg wet	6.60		78.5	30-130			
Surrogate: Phenol-d6	5.21		mg/Kg wet	6.60		79.0	30-130			
Surrogate: Nitrobenzene-d5	2.38		mg/Kg wet	3.30		72.2	30-130			
Surrogate: 2-Fluorobiphenyl	2.99		mg/Kg wet	3.30		90.6	30-130			
Surrogate: 2,4,6-Tribromophenol	4.45		mg/Kg wet	6.60		67.4	30-130			
Surrogate: p-Terphenyl-d14	2.40		mg/Kg wet	3.30		72.8	30-130			
LCS (B248158-BS1)				Prepared: 12/11/19 Analyzed: 12/12/19						
Acenaphthene	1.18	0.17	mg/Kg wet	1.63		72.6	40-140			
Acenaphthylene	1.24	0.17	mg/Kg wet	1.63		76.2	40-140			
Acetophenone	1.19	0.33	mg/Kg wet	1.63		73.1	40-140			
Aniline	0.814	0.33	mg/Kg wet	1.63		50.0	40-140			
Anthracene	1.29	0.17	mg/Kg wet	1.63		79.1	40-140			
Benzo(a)anthracene	1.28	0.17	mg/Kg wet	1.63		78.7	40-140			
Benzo(a)pyrene	1.20	0.17	mg/Kg wet	1.63		73.9	40-140			
Benzo(b)fluoranthene	1.21	0.17	mg/Kg wet	1.63		74.2	40-140			
Benzo(g,h,i)perylene	1.20	0.17	mg/Kg wet	1.63		73.9	40-140			
Benzo(k)fluoranthene	1.24	0.17	mg/Kg wet	1.63		75.9	40-140			
Bis(2-chloroethoxy)methane	1.24	0.33	mg/Kg wet	1.63		75.9	40-140			
Bis(2-chloroethyl)ether	1.16	0.33	mg/Kg wet	1.63		71.5	40-140			
Bis(2-chloroisopropyl)ether	1.33	0.33	mg/Kg wet	1.63		81.8	40-140			
Bis(2-Ethylhexyl)phthalate	1.27	0.33	mg/Kg wet	1.63		78.2	40-140			
4-Bromophenylphenylether	1.30	0.33	mg/Kg wet	1.63		79.5	40-140			
Butylbenzylphthalate	1.31	0.33	mg/Kg wet	1.63		80.6	40-140			
4-Chloroaniline	0.991	0.64	mg/Kg wet	1.63		60.8	15-140			†
2-Chloronaphthalene	1.05	0.33	mg/Kg wet	1.63		64.3	40-140			
2-Chlorophenol	1.17	0.33	mg/Kg wet	1.63		72.1	30-130			
Chrysene	1.21	0.17	mg/Kg wet	1.63		74.2	40-140			
Dibenz(a,h)anthracene	1.15	0.17	mg/Kg wet	1.63		70.5	40-140			
Dibenzofuran	1.28	0.33	mg/Kg wet	1.63		78.3	40-140			
Di-n-butylphthalate	1.24	0.33	mg/Kg wet	1.63		76.3	40-140			
1,2-Dichlorobenzene	1.07	0.33	mg/Kg wet	1.63		65.6	40-140			
1,3-Dichlorobenzene	1.06	0.33	mg/Kg wet	1.63		64.9	40-140			
1,4-Dichlorobenzene	1.07	0.33	mg/Kg wet	1.63		65.7	40-140			
3,3-Dichlorobenzidine	1.07	0.17	mg/Kg wet	1.63		66.0	40-140			
2,4-Dichlorophenol	1.25	0.33	mg/Kg wet	1.63		76.7	30-130			
Diethylphthalate	1.23	0.33	mg/Kg wet	1.63		75.3	40-140			
2,4-Dimethylphenol	1.26	0.33	mg/Kg wet	1.63		77.4	30-130			
Dimethylphthalate	1.26	0.33	mg/Kg wet	1.63		77.3	40-140			
2,4-Dinitrophenol	0.420	0.64	mg/Kg wet	1.63		25.8	15-140			†
2,4-Dinitrotoluene	1.22	0.33	mg/Kg wet	1.63		74.8	40-140			
3,4-Dinitrotoluene	1.33	0.33	mg/Kg wet	1.63		82.0	40-140			
Di-n-octylphthalate	1.31	0.33	mg/Kg wet	1.63		80.3	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.27	0.33	mg/Kg wet	1.63		77.8	40-140			
Fluoranthene	1.23	0.17	mg/Kg wet	1.63		75.8	40-140			
Fluorene	1.23	0.17	mg/Kg wet	1.63		75.7	40-140			

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248158 - SW-846 3546										
LCS (B248158-BS1)					Prepared: 12/11/19 Analyzed: 12/12/19					
Hexachlorobenzene	1.27	0.33	mg/Kg wet	1.63		77.9	40-140			
Hexachlorobutadiene	1.10	0.33	mg/Kg wet	1.63		67.7	40-140			
Hexachloroethane	1.06	0.33	mg/Kg wet	1.63		65.1	40-140			
Indeno(1,2,3-cd)pyrene	1.25	0.17	mg/Kg wet	1.63		76.5	40-140			
Isophorone	1.23	0.33	mg/Kg wet	1.63		75.8	40-140			
2-Methylnaphthalene	1.32	0.17	mg/Kg wet	1.63		80.9	40-140			
2-Methylphenol	1.15	0.33	mg/Kg wet	1.63		70.8	30-130			
3/4-Methylphenol	1.23	0.33	mg/Kg wet	1.63		75.6	30-130			
Naphthalene	1.17	0.17	mg/Kg wet	1.63		71.7	40-140			
Nitrobenzene	1.12	0.33	mg/Kg wet	1.63		68.7	40-140			
2-Nitrophenol	1.18	0.33	mg/Kg wet	1.63		72.6	30-130			
4-Nitrophenol	1.11	0.64	mg/Kg wet	1.63		68.4	15-140			†
Pentachlorophenol	0.955	0.33	mg/Kg wet	1.63		58.6	30-130			
Phenanthrene	1.29	0.17	mg/Kg wet	1.63		79.4	40-140			
Phenol	1.17	0.33	mg/Kg wet	1.63		71.5	15-140			†
Pyrene	1.18	0.17	mg/Kg wet	1.63		72.3	40-140			V-05
Pyridine	0.716	0.33	mg/Kg wet	1.63		43.9	30-140			†
1,2,4-Trichlorobenzene	1.14	0.33	mg/Kg wet	1.63		70.2	40-140			
2,5-Trichlorophenol	1.25	0.33	mg/Kg wet	1.63		76.6	30-130			
2,6-Trichlorophenol	1.25	0.33	mg/Kg wet	1.63		77.0	30-130			
Surrogate: 2-Fluorophenol	5.08		mg/Kg wet	6.51		78.0	30-130			
Surrogate: Phenol-d6	5.04		mg/Kg wet	6.51		77.4	30-130			
Surrogate: Nitrobenzene-d5	2.44		mg/Kg wet	3.26		74.9	30-130			
Surrogate: 2-Fluorobiphenyl	3.11		mg/Kg wet	3.26		95.4	30-130			
Surrogate: 2,4,6-Tribromophenol	5.37		mg/Kg wet	6.51		82.4	30-130			
Surrogate: p-Terphenyl-d14	2.63		mg/Kg wet	3.26		80.8	30-130			
LCS Dup (B248158-BS1)					Prepared: 12/11/19 Analyzed: 12/12/19					
Acenaphthene	1.18	0.17	mg/Kg wet	1.66		71.6	40-140	0.144	30	
Acenaphthylene	1.25	0.17	mg/Kg wet	1.66		75.7	40-140	0.878	30	
Acetophenone	1.23	0.34	mg/Kg wet	1.66		74.5	40-140	3.59	30	
Aniline	0.841	0.34	mg/Kg wet	1.66		50.8	40-140	3.35	30	
Anthracene	1.30	0.17	mg/Kg wet	1.66		78.3	40-140	0.574	30	
Benzo(a)anthracene	1.31	0.17	mg/Kg wet	1.66		78.9	40-140	1.87	30	
Benzo(a)pyrene	1.25	0.17	mg/Kg wet	1.66		75.6	40-140	3.89	30	
Benzo(b)fluoranthene	1.26	0.17	mg/Kg wet	1.66		76.1	40-140	4.12	30	
Benzo(g,h,i)perylene	1.19	0.17	mg/Kg wet	1.66		71.7	40-140	1.46	30	
Benzo(k)fluoranthene	1.30	0.17	mg/Kg wet	1.66		78.6	40-140	5.14	30	
Bis(2-chloroethoxy)methane	1.30	0.34	mg/Kg wet	1.66		78.8	40-140	5.31	30	
Bis(2-chloroethyl)ether	1.22	0.34	mg/Kg wet	1.66		73.8	40-140	4.92	30	
Bis(2-chloroisopropyl)ether	1.39	0.34	mg/Kg wet	1.66		83.8	40-140	4.03	30	
Bis(2-Ethylhexyl)phthalate	1.37	0.34	mg/Kg wet	1.66		82.6	40-140	7.14	30	
4-Bromophenylphenylether	1.28	0.34	mg/Kg wet	1.66		77.0	40-140	1.55	30	
Butylbenzylphthalate	1.29	0.34	mg/Kg wet	1.66		77.8	40-140	1.97	30	
4-Chloroaniline	1.04	0.66	mg/Kg wet	1.66		62.7	15-140	4.59	30	†
2-Chloronaphthalene	1.09	0.34	mg/Kg wet	1.66		65.6	40-140	3.55	30	
2-Chlorophenol	1.23	0.34	mg/Kg wet	1.66		74.6	30-130	4.97	30	
Chrysene	1.30	0.17	mg/Kg wet	1.66		78.7	40-140	7.52	30	
Dibenz(a,h)anthracene	1.16	0.17	mg/Kg wet	1.66		70.1	40-140	0.959	30	
Dibenzofuran	1.29	0.34	mg/Kg wet	1.66		78.1	40-140	1.36	30	
Di-n-butylphthalate	1.30	0.34	mg/Kg wet	1.66		78.4	40-140	4.36	30	
1,2-Dichlorobenzene	1.12	0.34	mg/Kg wet	1.66		67.8	40-140	4.94	30	

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248158 - SW-846 3546										
LCS Dup (B248158-BSD1)					Prepared: 12/11/19 Analyzed: 12/12/19					
1,3-Dichlorobenzene	1.09	0.34	mg/Kg wet	1.66		65.7	40-140	2.87	30	
1,4-Dichlorobenzene	1.11	0.34	mg/Kg wet	1.66		67.3	40-140	4.08	30	
3,3-Dichlorobenzidine	1.05	0.17	mg/Kg wet	1.66		63.7	40-140	1.88	30	
2,4-Dichlorophenol	1.28	0.34	mg/Kg wet	1.66		77.2	30-130	2.29	30	
Diethylphthalate	1.25	0.34	mg/Kg wet	1.66		75.4	40-140	1.83	30	
2,4-Dimethylphenol	1.30	0.34	mg/Kg wet	1.66		78.6	30-130	3.18	30	
Dimethylphthalate	1.25	0.34	mg/Kg wet	1.66		75.3	40-140	0.980	30	
2,4-Dinitrophenol	0.430	0.66	mg/Kg wet	1.66		26.0	15-140	2.41	30	†
2,4-Dinitrotoluene	1.29	0.34	mg/Kg wet	1.66		77.8	40-140	5.52	30	
2,6-Dinitrotoluene	1.32	0.34	mg/Kg wet	1.66		79.9	40-140	0.853	30	
Di-n-octylphthalate	1.40	0.34	mg/Kg wet	1.66		84.6	40-140	6.88	30	
1,2-Diphenylhydrazine/Azobenzene	1.30	0.34	mg/Kg wet	1.66		78.6	40-140	2.72	30	
Fluoranthene	1.30	0.17	mg/Kg wet	1.66		78.3	40-140	4.86	30	
Fluorene	1.28	0.17	mg/Kg wet	1.66		77.6	40-140	4.07	30	
Hexachlorobenzene	1.26	0.34	mg/Kg wet	1.66		76.0	40-140	0.854	30	
Hexachlorobutadiene	1.16	0.34	mg/Kg wet	1.66		70.1	40-140	5.10	30	
Hexachloroethane	1.09	0.34	mg/Kg wet	1.66		66.0	40-140	2.95	30	
Indeno(1,2,3-cd)pyrene	1.25	0.17	mg/Kg wet	1.66		75.6	40-140	0.406	30	
Phosphorane	1.32	0.34	mg/Kg wet	1.66		79.4	40-140	6.30	30	
Methylnaphthalene	1.41	0.17	mg/Kg wet	1.66		85.0	40-140	6.56	30	
2-Methylphenol	1.23	0.34	mg/Kg wet	1.66		74.3	30-130	6.44	30	
3/4-Methylphenol	1.29	0.34	mg/Kg wet	1.66		77.9	30-130	4.74	30	
Naphthalene	1.23	0.17	mg/Kg wet	1.66		74.3	40-140	5.15	30	
Nitrobenzene	1.22	0.34	mg/Kg wet	1.66		73.7	40-140	8.72	30	
2-Nitrophenol	1.26	0.34	mg/Kg wet	1.66		76.4	30-130	6.77	30	
4-Nitrophenol	1.18	0.66	mg/Kg wet	1.66		71.4	15-140	5.88	30	†
Pentachlorophenol	0.962	0.34	mg/Kg wet	1.66		58.1	30-130	0.751	30	
Phenanthrene	1.31	0.17	mg/Kg wet	1.66		79.4	40-140	1.67	30	
Phenol	1.21	0.34	mg/Kg wet	1.66		73.0	15-140	3.66	30	†
Pyrene	1.19	0.17	mg/Kg wet	1.66		71.8	40-140	0.976	30	V-05
Pyridine	0.733	0.34	mg/Kg wet	1.66		44.3	30-140	2.46	30	†
1,2,4-Trichlorobenzene	1.20	0.34	mg/Kg wet	1.66		72.8	40-140	5.17	30	
2,4,5-Trichlorophenol	1.28	0.34	mg/Kg wet	1.66		77.2	30-130	2.37	30	
2,4,6-Trichlorophenol	1.21	0.34	mg/Kg wet	1.66		73.3	30-130	3.26	30	
Surrogate: 2-Fluorophenol	5.17		mg/Kg wet	6.62		78.0	30-130			
Surrogate: Phenol-d6	5.20		mg/Kg wet	6.62		78.5	30-130			
Surrogate: Nitrobenzene-d5	2.52		mg/Kg wet	3.31		76.1	30-130			
Surrogate: 2-Fluorobiphenyl	2.98		mg/Kg wet	3.31		90.0	30-130			
Surrogate: 2,4,6-Tribromophenol	5.40		mg/Kg wet	6.62		81.5	30-130			
Surrogate: p-Terphenyl-d14	2.59		mg/Kg wet	3.31		78.1	30-130			



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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B248185 - SW-846 3546

Blank (B248185-BLK1)

Prepared: 12/12/19 Analyzed: 12/15/19

C9-C18 Aliphatics	ND	10	mg/Kg wet							
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
Acenaphthene	ND	0.10	mg/Kg wet							
Acenaphthylene	ND	0.10	mg/Kg wet							
Anthracene	ND	0.10	mg/Kg wet							
Benzo(a)anthracene	ND	0.10	mg/Kg wet							
Benzo(a)pyrene	ND	0.10	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet							
Chrysene	ND	0.10	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet							
Fluoranthene	ND	0.10	mg/Kg wet							
Fluorene	ND	0.10	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet							
2-Methylnaphthalene	ND	0.10	mg/Kg wet							
Naphthalene	ND	0.10	mg/Kg wet							
Phenanthrene	ND	0.10	mg/Kg wet							
rene	ND	0.10	mg/Kg wet							
n-Decane	ND	0.50	mg/Kg wet							
n-Docosane	ND	0.50	mg/Kg wet							
n-Dodecane	ND	0.50	mg/Kg wet							
n-Eicosane	ND	0.50	mg/Kg wet							
n-Hexacosane	ND	0.50	mg/Kg wet							
n-Hexadecane	ND	0.50	mg/Kg wet							
n-Hexatriacontane	ND	0.50	mg/Kg wet							
n-Nonadecane	ND	0.50	mg/Kg wet							
n-Nonane	ND	0.50	mg/Kg wet							
n-Octacosane	ND	0.50	mg/Kg wet							
n-Octadecane	ND	0.50	mg/Kg wet							
n-Tetracosane	ND	0.50	mg/Kg wet							
n-Tetradecane	ND	0.50	mg/Kg wet							
n-Triacontane	ND	0.50	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	3.76		mg/Kg wet	5.00		75.1	40-140			
Surrogate: o-Terphenyl (OTP)	3.88		mg/Kg wet	5.00		77.6	40-140			
Surrogate: 2-Bromonaphthalene	4.74		mg/Kg wet	5.00		94.8	40-140			
Surrogate: 2-Fluorobiphenyl	4.81		mg/Kg wet	5.00		96.2	40-140			

LCS (B248185-BS1)

Prepared: 12/12/19 Analyzed: 12/15/19

C9-C18 Aliphatics	19.2	10	mg/Kg wet	30.0		63.9	40-140			
C19-C36 Aliphatics	36.0	10	mg/Kg wet	40.0		89.9	40-140			
Unadjusted C11-C22 Aromatics	67.2	10	mg/Kg wet	85.0		79.0	40-140			
Acenaphthene	3.51	0.10	mg/Kg wet	5.00		70.3	40-140			
Acenaphthylene	3.23	0.10	mg/Kg wet	5.00		64.7	40-140			
anthracene	3.73	0.10	mg/Kg wet	5.00		74.7	40-140			
Benzo(a)anthracene	3.81	0.10	mg/Kg wet	5.00		76.1	40-140			
Benzo(a)pyrene	3.61	0.10	mg/Kg wet	5.00		72.2	40-140			
Benzo(b)fluoranthene	3.71	0.10	mg/Kg wet	5.00		74.1	40-140			

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B248185 - SW-846 3546</b>										
<b>LCS (B248185-BS1)</b>										
Prepared: 12/12/19 Analyzed: 12/15/19										
Benzo(g,h,i)perylene	3.54	0.10	mg/Kg wet	5.00		70.7	40-140			
Benzo(k)fluoranthene	3.65	0.10	mg/Kg wet	5.00		73.0	40-140			
Chrysene	3.87	0.10	mg/Kg wet	5.00		77.5	40-140			
Dibenz(a,h)anthracene	3.66	0.10	mg/Kg wet	5.00		73.2	40-140			
Fluoranthene	3.84	0.10	mg/Kg wet	5.00		76.7	40-140			
Fluorene	3.65	0.10	mg/Kg wet	5.00		73.0	40-140			
Indeno(1,2,3-cd)pyrene	3.46	0.10	mg/Kg wet	5.00		69.2	40-140			
2-Methylnaphthalene	3.14	0.10	mg/Kg wet	5.00		62.7	40-140			
Naphthalene	2.94	0.10	mg/Kg wet	5.00		58.7	40-140			
Phenanthrene	3.86	0.10	mg/Kg wet	5.00		77.2	40-140			
Pyrene	3.92	0.10	mg/Kg wet	5.00		78.5	40-140			
n-Decane	2.17	0.50	mg/Kg wet	5.00		43.4	40-140			
n-Docosane	3.85	0.50	mg/Kg wet	5.00		77.0	40-140			
n-Dodecane	2.76	0.50	mg/Kg wet	5.00		55.3	40-140			
n-Eicosane	3.74	0.50	mg/Kg wet	5.00		74.8	40-140			
n-Hexacosane	3.94	0.50	mg/Kg wet	5.00		78.7	40-140			
n-Hexadecane	3.63	0.50	mg/Kg wet	5.00		72.6	40-140			
n-Hexatriacontane	3.55	0.50	mg/Kg wet	5.00		70.9	40-140			
n-Nonadecane	3.76	0.50	mg/Kg wet	5.00		75.3	40-140			
n-Nonane	1.44	0.50	mg/Kg wet	5.00		28.9 *	30-140			L-07
n-Octacosane	3.87	0.50	mg/Kg wet	5.00		77.4	40-140			
n-Octadecane	3.78	0.50	mg/Kg wet	5.00		75.7	40-140			
n-Tetracosane	3.87	0.50	mg/Kg wet	5.00		77.3	40-140			
n-Tetradecane	3.31	0.50	mg/Kg wet	5.00		66.2	40-140			
n-Triacontane	3.96	0.50	mg/Kg wet	5.00		79.2	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	3.55		mg/Kg wet	5.00		70.9	40-140			
Surrogate: o-Terphenyl (OTP)	3.70		mg/Kg wet	5.00		74.0	40-140			
Surrogate: 2-Bromonaphthalene	4.66		mg/Kg wet	5.00		93.3	40-140			
Surrogate: 2-Fluorobiphenyl	4.96		mg/Kg wet	5.00		99.2	40-140			
<b>LCS Dup (B248185-BSD1)</b>										
Prepared: 12/12/19 Analyzed: 12/15/19										
C9-C18 Aliphatics	20.0	10	mg/Kg wet	30.0		66.6	40-140	4.25	25	
C19-C36 Aliphatics	34.8	10	mg/Kg wet	40.0		87.1	40-140	3.14	25	
Unadjusted C11-C22 Aromatics	65.2	10	mg/Kg wet	85.0		76.7	40-140	2.93	25	
Acenaphthene	3.59	0.10	mg/Kg wet	5.00		71.8	40-140	2.17	25	
Acenaphthylene	3.34	0.10	mg/Kg wet	5.00		66.8	40-140	3.26	25	
Anthracene	3.57	0.10	mg/Kg wet	5.00		71.4	40-140	4.54	25	
Benzo(a)anthracene	3.63	0.10	mg/Kg wet	5.00		72.5	40-140	4.86	25	
Benzo(a)pyrene	3.47	0.10	mg/Kg wet	5.00		69.3	40-140	4.10	25	
Benzo(b)fluoranthene	3.56	0.10	mg/Kg wet	5.00		71.2	40-140	3.98	25	
Benzo(g,h,i)perylene	3.42	0.10	mg/Kg wet	5.00		68.4	40-140	3.30	25	
Benzo(k)fluoranthene	3.50	0.10	mg/Kg wet	5.00		69.9	40-140	4.22	25	
Chrysene	3.69	0.10	mg/Kg wet	5.00		73.9	40-140	4.79	25	
Dibenz(a,h)anthracene	3.54	0.10	mg/Kg wet	5.00		70.8	40-140	3.37	25	
Fluoranthene	3.66	0.10	mg/Kg wet	5.00		73.1	40-140	4.85	25	
Fluorene	3.59	0.10	mg/Kg wet	5.00		71.7	40-140	1.73	25	
Indeno(1,2,3-cd)pyrene	3.37	0.10	mg/Kg wet	5.00		67.4	40-140	2.68	25	
2-Methylnaphthalene	3.37	0.10	mg/Kg wet	5.00		67.3	40-140	7.06	25	
Naphthalene	3.25	0.10	mg/Kg wet	5.00		65.0	40-140	10.2	25	
Phenanthrene	3.69	0.10	mg/Kg wet	5.00		73.8	40-140	4.54	25	

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248185 - SW-846 3546										
LCS Dup (B248185-BSD1)				Prepared: 12/12/19 Analyzed: 12/15/19						
Pyrene	3.73	0.10	mg/Kg wet	5.00		74.7	40-140	4.92	25	
n-Decane	2.52	0.50	mg/Kg wet	5.00		50.4	40-140	14.8	25	
n-Docosane	3.69	0.50	mg/Kg wet	5.00		73.8	40-140	4.25	25	
n-Dodecane	3.04	0.50	mg/Kg wet	5.00		60.9	40-140	9.63	25	
n-Eicosane	3.59	0.50	mg/Kg wet	5.00		71.7	40-140	4.14	25	
n-Hexacosane	3.81	0.50	mg/Kg wet	5.00		76.2	40-140	3.27	25	
n-Hexadecane	3.55	0.50	mg/Kg wet	5.00		71.0	40-140	2.21	25	
n-Hexatriacontane	3.48	0.50	mg/Kg wet	5.00		69.7	40-140	1.76	25	
n-Nonadecane	3.63	0.50	mg/Kg wet	5.00		72.6	40-140	3.64	25	
n-Nonane	1.70	0.50	mg/Kg wet	5.00		34.0	30-140	16.3	25	
n-Octacosane	3.75	0.50	mg/Kg wet	5.00		74.9	40-140	3.20	25	
n-Octadecane	3.65	0.50	mg/Kg wet	5.00		73.0	40-140	3.58	25	
n-Tetracosane	3.74	0.50	mg/Kg wet	5.00		74.7	40-140	3.37	25	
n-Tetradecane	3.43	0.50	mg/Kg wet	5.00		68.6	40-140	3.51	25	
n-Triacontane	3.83	0.50	mg/Kg wet	5.00		76.7	40-140	3.25	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	3.50		mg/Kg wet	5.00		70.1	40-140			
Surrogate: o-Terphenyl (OTP)	3.49		mg/Kg wet	5.00		69.8	40-140			
Surrogate: 2-Bromonaphthalene	5.06		mg/Kg wet	5.00		101	40-140			
Surrogate: 2-Fluorobiphenyl	5.35		mg/Kg wet	5.00		107	40-140			

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## QUALITY CONTROL

## Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B248100 - SW-846 7471</b>										
<b>Blank (B248100-BLK1)</b>				Prepared: 12/11/19 Analyzed: 12/12/19						
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B248100-BS1)</b>				Prepared: 12/11/19 Analyzed: 12/12/19						
Mercury	6.65	0.39	mg/Kg wet	7.61		87.3	72.7-127.3			
<b>LCS Dup (B248100-BSD1)</b>				Prepared: 12/11/19 Analyzed: 12/12/19						
Mercury	7.27	0.38	mg/Kg wet	7.61		95.5	72.7-127.3	8.91	20	
<b>Batch B248270 - SW-846 3050B</b>										
<b>Blank (B248270-BLK1)</b>				Prepared: 12/12/19 Analyzed: 12/16/19						
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
<b>LCS (B248270-BS1)</b>				Prepared: 12/12/19 Analyzed: 12/16/19						
Antimony	119	5.0	mg/Kg wet	147		80.7	4.2-196.6			
Arsenic	140	5.0	mg/Kg wet	143		98.0	83.2-117.5			
Barium	424	5.0	mg/Kg wet	415		102	82.7-117.6			
Beryllium	173	0.50	mg/Kg wet	179		96.6	83.2-117.3			
Cadmium	54.0	0.50	mg/Kg wet	56.2		96.0	82.9-117.3			
Chromium	97.6	1.0	mg/Kg wet	101		96.7	82.4-116.8			
Lead	124	1.5	mg/Kg wet	125		99.2	82.4-116.8			
Nickel	107	1.0	mg/Kg wet	108		99.3	82.9-117.6			
Selenium	73.4	10	mg/Kg wet	77.9		94.2	79.3-120.7			
Silver	39.1	1.0	mg/Kg wet	34.3		114	81-119.2			
Thallium	121	5.0	mg/Kg wet	113		107	80.8-118.6			
Vanadium	79.0	2.0	mg/Kg wet	83.7		94.3	79.8-120.7			
Zinc	225	2.0	mg/Kg wet	240		94.0	80.8-118.8			
<b>LCS (B248270-BS2) MRL Check</b>				Prepared: 12/12/19 Analyzed: 12/16/19						
Lead	0.504	0.49	mg/Kg wet	0.490		103	82.4-116.8			

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## QUALITY CONTROL

## Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248270 - SW-846 3050B										
LCS Dup (B248270-BSD1)					Prepared: 12/12/19 Analyzed: 12/16/19					
Antimony	113	5.0	mg/Kg wet	147		76.7	4.2-196.6	5.08	30	
Arsenic	138	5.0	mg/Kg wet	143		96.5	83.2-117.5	1.56	30	
Barium	416	5.0	mg/Kg wet	415		100	82.7-117.6	2.01	20	
Beryllium	173	0.50	mg/Kg wet	179		96.7	83.2-117.3	0.0885	30	
Cadmium	54.2	0.50	mg/Kg wet	56.2		96.4	82.9-117.3	0.400	20	
Chromium	96.3	1.0	mg/Kg wet	101		95.3	82.4-116.8	1.37	30	
Lead	121	1.5	mg/Kg wet	125		97.1	82.4-116.8	2.13	30	
Nickel	107	1.0	mg/Kg wet	108		98.6	82.9-117.6	0.640	30	
Selenium	71.1	10	mg/Kg wet	77.9		91.2	79.3-120.7	3.17	30	
Silver	38.4	1.0	mg/Kg wet	34.3		112	81-119.2	1.77	30	
Thallium	120	5.0	mg/Kg wet	113		107	80.8-118.6	0.661	30	
Vanadium	77.5	2.0	mg/Kg wet	83.7		92.6	79.8-120.7	1.90	30	
Zinc	222	2.0	mg/Kg wet	240		92.7	80.8-118.8	1.37	30	

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**FLAG/QUALIFIER SUMMARY**

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

# CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<b>MADEP-EPH-04-1.1 in Soil</b>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Accenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<b>MADEP-EPH-04-1.1 in Water</b>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC

# CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<b>SW-846 6010D in Soil</b>	
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AI,HA,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8270D-E in Soil</b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY,NH
Aniline	NY,NH
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3'-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH



# CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D-E in Soil</i>	
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine/Azobenzene	NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<i>SW-846 8270D-E in Water</i>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D-E in Water</i>	
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine/Azobenzene	NY
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020



I Have Not Confirmed Sample Container  
Numbers With Lab Staff Before Relinquishing  
Over Samples \_\_\_\_\_



**con-test®**  
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False  
Statement will be brought to the attention of the Client - State True or False

Client CDW  
Received By BBR Date 12/10/19 Time 2030

How were the samples received? In Cooler T No Cooler \_\_\_\_\_ On Ice T No Ice \_\_\_\_\_  
Direct from Sampling \_\_\_\_\_ Ambient \_\_\_\_\_ Melted Ice \_\_\_\_\_

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 4.1  
By Blank # \_\_\_\_\_ Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? n/a Were Samples Tampled with? n/a  
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T  
Did COC include all Client T Analysis T Sampler Name T  
pertinent Information? Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T  
Are there Lab to Filters? F Who was notified? \_\_\_\_\_  
Are there Rushes? F Who was notified? \_\_\_\_\_  
Are there Short Holds? F Who was notified? \_\_\_\_\_

Is there enough Volume? T  
Is there Headspace where applicable? n/a MS/MSD? F  
Proper Media/Containers Used? T Is splitting samples required? F  
Were trip blanks received? F On COC? F  
Do all samples have the proper pH? Acid n/a Base n/a

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

#### Unused Media

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Comments:

## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory

Project #: 19L0396

Project Location: 225-227 Beaver St, Waltham, MA

RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

19L0396-01 thru 19L0396-03

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B (X)	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
----------	---	--

**Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

**I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.**

Signature: Lisa Worthington

Position: Technical Representative

Printed Name: Lisa A. WorthingtonDate: 12/16/19



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

December 17, 2019

Alan Sundquist  
CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760

Project Location: 240 Beaver St. Waltham, MA  
Client Job Number:  
Project Number: 1830.1  
Laboratory Work Order Number: 19L0400

Enclosed are results of analyses for samples received by the laboratory on December 10, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads 'Michelle Koch'. The signature is written in a cursive, flowing style.

Michelle M. Koch  
Project Manager

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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760  
ATTN: Alan Sundquist

REPORT DATE: 12/17/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1830.1

## ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19L0400

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 240 Beaver St. Waltham, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Gp4-1 (3-5')	19L0400-01	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
Gp4-2 (4-6')	19L0400-02	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
Gp4-3 (4-6')	19L0400-03	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
Gp4-4 (3-5')	19L0400-04	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
Gp4-5 (6-8')	19L0400-05	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
Gp4-6 (3-5')	19L0400-06	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
Gp4-7 (3-5')	19L0400-07	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
Gp4-9 (0-2')	19L0400-08	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
Gp4-2 (6-8')	19L0400-09	Soil		SM 2540G SW-846 8082A	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

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SW-846 6010D

**Qualifications:****MS-07**

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

**Analyte & Samples(s) Qualified:****Antimony**

19L0400-01[Gp4-1 (3-5)], B248351-MS1

**Selenium**

19L0400-01[Gp4-1 (3-5)], B248351-MS1

SW-846 8082A

**Qualifications:****S-01**

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

**Analyte & Samples(s) Qualified:****Decachlorobiphenyl**

19L0400-09[Gp4-2 (6-8')]

**Decachlorobiphenyl [2C]**

19L0400-09[Gp4-2 (6-8')]

**Tetrachloro-m-xylene**

19L0400-09[Gp4-2 (6-8')]

**Tetrachloro-m-xylene [2C]**

19L0400-09[Gp4-2 (6-8')]

SW-846 8270D-E

**Qualifications:****MS-09**

Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

**Analyte & Samples(s) Qualified:****3,3-Dichlorobenzidine**

19L0400-01[Gp4-1 (3-5)], B248158-MS1, B248158-MSD1

**4-Chloroaniline**

19L0400-01[Gp4-1 (3-5)], B248158-MS1, B248158-MSD1

**Aniline**

19L0400-01[Gp4-1 (3-5)], B248158-MS1, B248158-MSD1

**Hexachloroethane**

19L0400-01[Gp4-1 (3-5)], B248158-MS1, B248158-MSD1

**MS-22**

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

**Analyte & Samples(s) Qualified:****1,4-Dichlorobenzene**

B248158-MS1

**2-Chloronaphthalene**

B248158-MS1

**Hexachlorobenzene**

B248158-MS1

**RL-08**

Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

**Analyte & Samples(s) Qualified:**

19L0400-01[Gp4-1 (3-5)], 19L0400-02[Gp4-2 (4-6)], 19L0400-03[Gp4-3 (4-6)], 19L0400-04[Gp4-4 (3-5)], 19L0400-05[Gp4-5 (6-8)], 19L0400-06[Gp4-6 (3-5)], 19L0400-07[Gp4-7 (3-5)]



---

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---

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:****Pentachlorophenol**

19L0400-04[Gp4-4 (3-5')], 19L0400-05[Gp4-5 (6-8')], 19L0400-06[Gp4-6 (3-5')], 19L0400-07[Gp4-7 (3-5')], 19L0400-08[Gp4-9 (0-2')], S043741-CCV1, S043758-CCV1

**Pyrene**

19L0400-01[Gp4-1 (3-5')], 19L0400-02[Gp4-2 (4-6')], 19L0400-03[Gp4-3 (4-6')], B248158-BLK1, B248158-BS1, B248158-BSD1, B248158-MS1, B248158-MSD1, S043694-CCV1

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V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

**Analyte & Samples(s) Qualified:****4-Chloroaniline**

19L0400-04[Gp4-4 (3-5')], 19L0400-05[Gp4-5 (6-8')], 19L0400-06[Gp4-6 (3-5')], 19L0400-07[Gp4-7 (3-5')], 19L0400-08[Gp4-9 (0-2')], S043741-CCV1, S043758-CCV1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington

Technical Representative

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-1 (3-5')

Sampled: 12/9/2019 08:05

Sample ID: 19L0400-01

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Acenaphthylene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Acetophenone	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Aniline	ND	0.72	mg/Kg dry	2	MS-09	SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Anthracene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Benzo(a)anthracene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Benzo(a)pyrene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Benzo(b)fluoranthene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Benzo(g,h,i)perylene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Benzo(k)fluoranthene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Bis(2-chloroethoxy)methane	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Bis(2-chloroethyl)ether	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Bis(2-chloroisopropyl)ether	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
4-Bromophenylphenylether	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Butylbenzylphthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
4-Chloroaniline	ND	1.4	mg/Kg dry	2	MS-09	SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
2-Chloronaphthalene	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
2-Chlorophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Chrysene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Dibenz(a,h)anthracene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Dibenzofuran	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Di-n-butylphthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
1,2-Dichlorobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
1,3-Dichlorobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
1,4-Dichlorobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
3,3-Dichlorobenzidine	ND	0.36	mg/Kg dry	2	MS-09	SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
2,4-Dichlorophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Diethylphthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
2,4-Dimethylphenol	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Dimethylphthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
2,4-Dinitrotoluene	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
2,6-Dinitrotoluene	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Di-n-octylphthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Fluoranthene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Fluorene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Hexachlorobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Hexachlorobutadiene	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Hexachloroethane	ND	0.72	mg/Kg dry	2	MS-09	SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Indeno(1,2,3-cd)pyrene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Isophorone	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
2-Methylnaphthalene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-1 (3-5')

Sampled: 12/9/2019 08:05

Sample ID: 19L0400-01

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
3/4-Methylphenol	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Naphthalene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Nitrobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
2-Nitrophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
4-Nitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Pentachlorophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Phenanthrene	ND	0.36	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Phenol	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Pyrene	ND	0.36	mg/Kg dry	2	V-05	SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
1,2,4-Trichlorobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
2,4,5-Trichlorophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
2,4,6-Trichlorophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 17:41	IMR
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorophenol	48.4		30-130				12/12/19 17:41		
Phenol-d6	48.2		30-130				12/12/19 17:41		
Nitrobenzene-d5	44.5		30-130				12/12/19 17:41		
2-Fluorobiphenyl	55.0		30-130				12/12/19 17:41		
2,4,6-Tribromophenol	47.8		30-130				12/12/19 17:41		
p-Terphenyl-d14	53.4		30-130				12/12/19 17:41		

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-1 (3-5')

Sampled: 12/9/2019 08:05

Sample ID: 19L0400-01

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1	MS-07	SW-846 6010D	12/13/19	12/16/19 21:10	MJH
Arsenic	12	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:51	MJH
Barium	37	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:51	MJH
Beryllium	0.37	0.18	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:51	MJH
Cadmium	0.25	0.18	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:51	MJH
Chromium	31	0.35	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:51	MJH
Lead	46	0.53	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:51	MJH
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	12/11/19	12/12/19 11:51	CJV
Nickel	22	0.35	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:51	MJH
Selenium	ND	3.5	mg/Kg dry	1	MS-07	SW-846 6010D	12/13/19	12/16/19 21:10	MJH
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:51	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 21:10	MJH
Vanadium	56	0.70	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:51	MJH
Zinc	57	0.70	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:51	MJH



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-1 (3-5')

Sampled: 12/9/2019 08:05

Sample ID: 19L0400-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.3		% Wt	1		SM 2540G	12/11/19	12/11/19 15:03	adb



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-2 (4-6')

Sampled: 12/9/2019 08:40

Sample ID: 19L0400-02

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Acenaphthylene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Acetophenone	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Aniline	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Benzo(a)anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Benzo(a)pyrene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Benzo(b)fluoranthene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Benzo(g,h,i)perylene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Benzo(k)fluoranthene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Bis(2-chloroethoxy)methane	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Bis(2-chloroethyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Bis(2-chloroisopropyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
4-Bromophenylphenylether	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Butylbenzylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
2-Chloronaphthalene	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
2-Chlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Chrysene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Dibenz(a,h)anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Dibenzofuran	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Di-n-butylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
1,2-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
1,3-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
1,4-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
3,3-Dichlorobenzidine	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
2,4-Dichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Diethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
2,4-Dimethylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Dimethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
2,4-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
2,6-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Di-n-octylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Fluoranthene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Fluorene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Hexachlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Hexachlorobutadiene	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Hexachloroethane	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Indeno(1,2,3-cd)pyrene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Isophorone	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
2-Methylnaphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-2 (4-6')

Sampled: 12/9/2019 08:40

Sample ID: 19L0400-02

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
3/4-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Naphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Nitrobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
2-Nitrophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Pentachlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Phenanthrene	ND	0.37	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Phenol	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
Pyrene	ND	0.37	mg/Kg dry	2	V-05	SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
1,2,4-Trichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
2,4,5-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR
2,4,6-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:06	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	48.7	30-130	
Phenol-d6	48.3	30-130	
Nitrobenzene-d5	44.0	30-130	
2-Fluorobiphenyl	57.5	30-130	
2,4,6-Tribromophenol	48.6	30-130	
p-Terphenyl-d14	57.2	30-130	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-2 (4-6')

Sampled: 12/9/2019 08:40

Sample ID: 19L0400-02

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH
Arsenic	5.3	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH
Barium	46	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH
Beryllium	0.25	0.18	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH
Cadmium	0.36	0.18	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH
Chromium	21	0.35	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH
Lead	35	0.53	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	12/11/19	12/12/19 11:53	CJV
Nickel	13	0.35	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH
Silver	1.9	0.35	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 21:16	MJH
Vanadium	38	0.71	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH
Zinc	110	0.71	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 15:56	MJH



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-2 (4-6')

Sampled: 12/9/2019 08:40

Sample ID: 19L0400-02

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.8		% Wt	1		SM 2540G	12/11/19	12/11/19 15:03	adb



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-3 (4-6")

Sampled: 12/9/2019 09:30

Sample ID: 19L0400-03

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Acenaphthylene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Acetophenone	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Aniline	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Anthracene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Benzo(a)anthracene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Benzo(a)pyrene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Benzo(b)fluoranthene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Benzo(g,h,i)perylene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Benzo(k)fluoranthene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Bis(2-chloroethoxy)methane	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Bis(2-chloroethyl)ether	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Bis(2-chloroisopropyl)ether	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
4-Bromophenylphenylether	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
3-Butylbenzylphthalate	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
4-Chloroaniline	ND	1.4	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
2-Chloronaphthalene	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
2-Chlorophenol	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Chrysene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Dibenz(a,h)anthracene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Dibenzofuran	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Di-n-butylphthalate	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
1,2-Dichlorobenzene	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
1,3-Dichlorobenzene	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
1,4-Dichlorobenzene	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
3,3-Dichlorobenzidine	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
2,4-Dichlorophenol	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Diethylphthalate	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
2,4-Dimethylphenol	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Dimethylphthalate	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
2,4-Dinitrotoluene	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
2,6-Dinitrotoluene	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Di-n-octylphthalate	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Fluoranthene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Fluorene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Hexachlorobenzene	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Hexachlorobutadiene	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Hexachloroethane	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Indeno(1,2,3-cd)pyrene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Isophorone	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
2-Methylnaphthalene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-3 (4-6')

Sampled: 12/9/2019 09:30

Sample ID: 19L0400-03

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
3/4-Methylphenol	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Naphthalene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Nitrobenzene	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
2-Nitrophenol	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
4-Nitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Pentachlorophenol	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Phenanthrene	ND	0.35	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Phenol	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
Pyrene	ND	0.35	mg/Kg dry	2	V-05	SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
1,2,4-Trichlorobenzene	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
2,4,5-Trichlorophenol	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR
2,4,6-Trichlorophenol	ND	0.71	mg/Kg dry	2		SW-846 8270D-E	12/11/19	12/12/19 18:31	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	39.8	30-130	12/12/19 18:31
Phenol-d6	38.8	30-130	12/12/19 18:31
Nitrobenzene-d5	35.2	30-130	12/12/19 18:31
2-Fluorobiphenyl	44.7	30-130	12/12/19 18:31
2,4,6-Tribromophenol	38.7	30-130	12/12/19 18:31
p-Terphenyl-d14	43.8	30-130	12/12/19 18:31

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-3 (4-6')

Sampled: 12/9/2019 09:30

Sample ID: 19L0400-03

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH
Arsenic	7.9	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH
Barium	31	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH
Beryllium	0.31	0.18	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH
Cadmium	ND	0.18	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH
Chromium	34	0.35	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH
Lead	39	0.53	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	12/11/19	12/12/19 11:55	CJV
Nickel	23	0.35	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 21:36	MJH
Vanadium	62	0.70	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH
Zinc	51	0.70	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:15	MJH



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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-3 (4-6')

Sampled: 12/9/2019 09:30

Sample ID: 19L0400-03

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.9		% Wt	1		SM 2540G	12/11/19	12/11/19 15:04	adb

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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-4 (3-5')

Sampled: 12/9/2019 09:50

Sample ID: 19L0400-04

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Acenaphthylene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Acetophenone	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Aniline	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Anthracene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Benzo(a)anthracene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Benzo(a)pyrene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Benzo(b)fluoranthene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Benzo(g,h,i)perylene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Benzo(k)fluoranthene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Bis(2-chloroethoxy)methane	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Bis(2-chloroethyl)ether	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Bis(2-chloroisopropyl)ether	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Bis(2-Ethylhexyl)phthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
4-Bromophenylphenylether	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Butylbenzylphthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
4-Chloroaniline	ND	3.4	mg/Kg dry	4	V-34	SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
2-Chloronaphthalene	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
2-Chlorophenol	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Chrysene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Dibenz(a,h)anthracene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Dibenzofuran	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Di-n-butylphthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
1,2-Dichlorobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
1,3-Dichlorobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
1,4-Dichlorobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
3,3-Dichlorobenzidine	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
2,4-Dichlorophenol	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Diethylphthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
2,4-Dimethylphenol	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Dimethylphthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
2,4-Dinitrophenol	ND	3.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
2,4-Dinitrotoluene	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
2,6-Dinitrotoluene	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Di-n-octylphthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Fluoranthene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Fluorene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Hexachlorobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Hexachlorobutadiene	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Hexachloroethane	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Indeno(1,2,3-cd)pyrene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Isophorone	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
2-Methylnaphthalene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB



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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-4 (3-5')

Sampled: 12/9/2019 09:50

Sample ID: 19L0400-04

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
3/4-Methylphenol	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Naphthalene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Nitrobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
2-Nitrophenol	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
4-Nitrophenol	ND	3.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Pentachlorophenol	ND	1.7	mg/Kg dry	4	V-05	SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Phenanthrene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Phenol	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Pyrene	ND	0.86	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
1,2,4-Trichlorobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
2,4,5-Trichlorophenol	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
2,4,6-Trichlorophenol	ND	1.7	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:07	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	49.4	30-130						12/13/19 21:07	
Phenol-d6	52.3	30-130						12/13/19 21:07	
Nitrobenzene-d5	48.1	30-130						12/13/19 21:07	
2-Fluorobiphenyl	51.1	30-130						12/13/19 21:07	
2,4,6-Tribromophenol	34.5	30-130						12/13/19 21:07	
p-Terphenyl-d14	51.1	30-130						12/13/19 21:07	

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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-4 (3-5')

Sampled: 12/9/2019 09:50

Sample ID: 19L0400-04

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.1	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH
Arsenic	7.9	2.1	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH
Barium	46	2.1	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH
Beryllium	0.44	0.21	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH
Cadmium	ND	0.21	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH
Chromium	29	0.43	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH
Lead	28	0.64	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH
Mercury	0.036	0.033	mg/Kg dry	1		SW-846 7471B	12/11/19	12/12/19 12:00	CJV
Nickel	22	0.43	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH
Selenium	ND	4.3	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH
Silver	ND	0.43	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH
Thallium	ND	2.1	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 21:42	MJH
Vanadium	56	0.85	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH
Zinc	65	0.85	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:21	MJH



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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-4 (3-5')

Sampled: 12/9/2019 09:50

Sample ID: 19L0400-04

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	77.4		% Wt	1		SM 2540G	12/11/19	12/11/19 15:04	adb



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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-5 (6-8')

Sampled: 12/9/2019 10:20

Sample ID: 19L0400-05

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Acenaphthylene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Acetophenone	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Aniline	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Anthracene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Benzo(a)anthracene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Benzo(a)pyrene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Benzo(b)fluoranthene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Benzo(g,h,i)perylene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Benzo(k)fluoranthene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Bis(2-chloroethoxy)methane	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Bis(2-chloroethyl)ether	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Bis(2-chloroisopropyl)ether	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Bis(2-Ethylhexyl)phthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
4-Bromophenylphenylether	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Butylbenzylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
4-Chloroaniline	ND	2.8	mg/Kg dry	4	V-34	SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
2-Chloronaphthalene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
2-Chlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Chrysene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Dibenz(a,h)anthracene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Dibenzofuran	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Di-n-butylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
1,2-Dichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
1,3-Dichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
1,4-Dichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
3,3-Dichlorobenzidine	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
2,4-Dichlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Diethylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
2,4-Dimethylphenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Dimethylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
2,4-Dinitrophenol	ND	2.8	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
2,4-Dinitrotoluene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
2,6-Dinitrotoluene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Di-n-octylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Fluoranthene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Fluorene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Hexachlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Hexachlorobutadiene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Hexachloroethane	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Indeno(1,2,3-cd)pyrene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Isophorone	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
2-Methylnaphthalene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-5 (6-8')

Sampled: 12/9/2019 10:20

Sample ID: 19L0400-05

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
3/4-Methylphenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Naphthalene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Nitrobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
2-Nitrophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
4-Nitrophenol	ND	2.8	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Pentachlorophenol	ND	1.4	mg/Kg dry	4	V-05	SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Phenanthrene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Phenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
Pyrene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
1,2,4-Trichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
2,4,5-Trichlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB
2,4,6-Trichlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:30	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	50.1	30-130	12/13/19 21:30
Phenol-d6	54.0	30-130	12/13/19 21:30
Nitrobenzene-d5	48.1	30-130	12/13/19 21:30
2-Fluorobiphenyl	54.0	30-130	12/13/19 21:30
2,4,6-Tribromophenol	33.8	30-130	12/13/19 21:30
p-Terphenyl-d14	52.3	30-130	12/13/19 21:30

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-5 (6-8')

Sampled: 12/9/2019 10:20

Sample ID: 19L0400-05

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH
Arsenic	17	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH
Barium	28	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH
Beryllium	0.34	0.18	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH
Cadmium	0.27	0.18	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH
Chromium	29	0.36	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH
Lead	27	0.53	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	12/11/19	12/12/19 12:02	CJV
Nickel	24	0.36	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 21:48	MJH
Vanadium	70	0.71	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH
Zinc	49	0.71	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:27	MJH





39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-5 (6-8')

Sampled: 12/9/2019 10:20

Sample ID: 19L0400-05

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.7		% Wt	1		SM 2540G	12/11/19	12/11/19 15:05	adb



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-6 (3-5')

Sampled: 12/9/2019 10:55

Sample ID: 19L0400-06

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Acenaphthylene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Acetophenone	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Aniline	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Anthracene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Benzo(a)anthracene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Benzo(a)pyrene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Benzo(b)fluoranthene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Benzo(g,h,i)perylene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Benzo(k)fluoranthene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Bis(2-chloroethoxy)methane	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Bis(2-chloroethyl)ether	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Bis(2-chloroisopropyl)ether	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Bis(2-Ethylhexyl)phthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
4-Bromophenylphenylether	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
3-Butylbenzylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
4-Chloroaniline	ND	2.8	mg/Kg dry	4	V-34	SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
2-Chloronaphthalene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
2-Chlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Chrysene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Dibenz(a,h)anthracene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Dibenzofuran	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Di-n-butylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
1,2-Dichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
1,3-Dichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
1,4-Dichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
3,3-Dichlorobenzidine	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
2,4-Dichlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Diethylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
2,4-Dimethylphenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Dimethylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
2,4-Dinitrophenol	ND	2.8	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
2,4-Dinitrotoluene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
2,6-Dinitrotoluene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Di-n-octylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Fluoranthene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Fluorene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Hexachlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Hexachlorobutadiene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Hexachloroethane	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Indeno(1,2,3-cd)pyrene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Isophorone	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
2-Methylnaphthalene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-6 (3-5")

Sampled: 12/9/2019 10:55

Sample ID: 19L0400-06

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
3/4-Methylphenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Naphthalene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Nitrobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
2-Nitrophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
4-Nitrophenol	ND	2.8	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Pentachlorophenol	ND	1.4	mg/Kg dry	4	V-05	SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Phenanthrene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Phenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
Pyrene	ND	0.72	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
1,2,4-Trichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
2,4,5-Trichlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB
2,4,6-Trichlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/13/19 21:53	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	56.8	30-130	12/13/19 21:53
Phenol-d6	60.9	30-130	12/13/19 21:53
Nitrobenzene-d5	54.7	30-130	12/13/19 21:53
2-Fluorobiphenyl	58.4	30-130	12/13/19 21:53
2,4,6-Tribromophenol	42.7	30-130	12/13/19 21:53
p-Terphenyl-d14	53.8	30-130	12/13/19 21:53



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-6 (3-5')

Sampled: 12/9/2019 10:55

Sample ID: 19L0400-06

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH
Arsenic	11	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH
Barium	27	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH
Beryllium	0.30	0.17	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH
Chromium	32	0.34	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH
Lead	24	0.51	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	12/11/19	12/12/19 12:04	CJV
Nickel	24	0.34	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH
Silver	ND	0.34	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 21:55	MJH
Vanadium	63	0.68	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH
Zinc	41	0.68	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:33	MJH



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-6 (3-5')

Sampled: 12/9/2019 10:55

Sample ID: 19L0400-06

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.7		% Wt	1		SM 2540G	12/11/19	12/11/19 15:05	adb



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-7 (3-5')

Sampled: 12/9/2019 11:30

Sample ID: 19L0400-07

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Acenaphthylene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Acetophenone	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Aniline	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Anthracene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Benzo(a)anthracene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Benzo(a)pyrene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Benzo(b)fluoranthene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Benzo(g,h,i)perylene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Benzo(k)fluoranthene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Bis(2-chloroethoxy)methane	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Bis(2-chloroethyl)ether	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Bis(2-chloroisopropyl)ether	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Bis(2-Ethylhexyl)phthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
4-Bromophenylphenylether	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
3-Butylbenzylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
4-Chloroaniline	ND	2.8	mg/Kg dry	4	V-34	SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
2-Chloronaphthalene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
2-Chlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Chrysene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Dibenz(a,h)anthracene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Dibenzofuran	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Di-n-butylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
1,2-Dichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
1,3-Dichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
1,4-Dichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
3,3-Dichlorobenzidine	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
2,4-Dichlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Diethylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
2,4-Dimethylphenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Dimethylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
2,4-Dinitrophenol	ND	2.8	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
2,4-Dinitrotoluene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
2,6-Dinitrotoluene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Di-n-octylphthalate	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Fluoranthene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Fluorene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Hexachlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Hexachlorobutadiene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Hexachloroethane	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Indeno(1,2,3-cd)pyrene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Isophorone	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
2-Methylnaphthalene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-7 (3-5')

Sampled: 12/9/2019 11:30

Sample ID: 19L0400-07

Sample Matrix: Soil

Sample Flags: RL-08

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
3/4-Methylphenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Naphthalene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Nitrobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
2-Nitrophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
4-Nitrophenol	ND	2.8	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Pentachlorophenol	ND	1.4	mg/Kg dry	4	V-05	SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Phenanthrene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Phenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
Pyrene	ND	0.71	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
1,2,4-Trichlorobenzene	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
2,4,5-Trichlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB
2,4,6-Trichlorophenol	ND	1.4	mg/Kg dry	4		SW-846 8270D-E	12/11/19	12/14/19 14:50	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	54.2	30-130	12/14/19 14:50
Phenol-d6	57.6	30-130	12/14/19 14:50
Nitrobenzene-d5	50.4	30-130	12/14/19 14:50
2-Fluorobiphenyl	59.7	30-130	12/14/19 14:50
2,4,6-Tribromophenol	46.5	30-130	12/14/19 14:50
p-Terphenyl-d14	61.7	30-130	12/14/19 14:50



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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-7 (3-5')

Sampled: 12/9/2019 11:30

Sample ID: 19L0400-07

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH
Arsenic	16	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH
Barium	28	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH
Beryllium	0.33	0.17	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH
Cadmium	0.24	0.17	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH
Chromium	32	0.34	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH
Lead	28	0.51	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	12/11/19	12/12/19 12:05	CJV
Nickel	25	0.34	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH
Silver	ND	0.34	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 22:01	MJH
Vanadium	61	0.67	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH
Zinc	44	0.67	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:39	MJH



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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-7 (3-5')

Sampled: 12/9/2019 11:30

Sample ID: 19L0400-07

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.7		% Wt	1		SM 2540G	12/11/19	12/11/19 15:06	adb

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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-9 (0-2')

Sampled: 12/9/2019 11:55

Sample ID: 19L0400-08

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Acenaphthylene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Aniline	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Benzo(a)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Benzo(a)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Benzo(b)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Benzo(g,h,i)perylene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Benzo(k)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
4-Chloroaniline	ND	0.68	mg/Kg dry	1	V-34	SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Chrysene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Dibenz(a,h)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
3,3-Dichlorobenzidine	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
2,4-Dinitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Fluorene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
2-Methylnaphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB



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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-9 (0-2')

Sampled: 12/9/2019 11:55

Sample ID: 19L0400-08

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Naphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
4-Nitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Pentachlorophenol	ND	0.35	mg/Kg dry	1	V-05	SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Phenanthrene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
Pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	12/11/19	12/13/19 18:24	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	70.6	30-130	12/13/19 18:24
Phenol-d6	73.6	30-130	12/13/19 18:24
Nitrobenzene-d5	65.8	30-130	12/13/19 18:24
2-Fluorobiphenyl	76.7	30-130	12/13/19 18:24
2,4,6-Tribromophenol	77.9	30-130	12/13/19 18:24
p-Terphenyl-d14	78.6	30-130	12/13/19 18:24

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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-9 (0-2')

Sampled: 12/9/2019 11:55

Sample ID: 19L0400-08

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH
Arsenic	ND	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH
Barium	24	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH
Beryllium	0.21	0.17	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH
Chromium	8.7	0.33	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH
Lead	4.5	0.50	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	12/11/19	12/12/19 11:43	CJV
Nickel	7.5	0.33	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH
Selenium	ND	3.3	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH
Silver	ND	0.33	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 22:07	MJH
Vanadium	22	0.67	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH
Zinc	23	0.67	mg/Kg dry	1		SW-846 6010D	12/13/19	12/16/19 16:45	MJH



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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-9 (0-2')

Sampled: 12/9/2019 11:55

Sample ID: 19L0400-08

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.1		% Wt	1		SM 2540G	12/11/19	12/11/19 15:06	adb

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-2 (6-8')

Sampled: 12/9/2019 08:40

Sample ID: 19L0400-09

Sample Matrix: Soil

## Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	6.5	mg/Kg dry	200		SW-846 8082A	12/12/19	12/14/19 3:10	TG
Aroclor-1221 [1]	ND	6.5	mg/Kg dry	200		SW-846 8082A	12/12/19	12/14/19 3:10	TG
Aroclor-1232 [1]	ND	6.5	mg/Kg dry	200		SW-846 8082A	12/12/19	12/14/19 3:10	TG
Aroclor-1242 [1]	ND	6.5	mg/Kg dry	200		SW-846 8082A	12/12/19	12/14/19 3:10	TG
Aroclor-1248 [1]	ND	6.5	mg/Kg dry	200		SW-846 8082A	12/12/19	12/14/19 3:10	TG
Aroclor-1254 [2]	15	6.5	mg/Kg dry	200		SW-846 8082A	12/12/19	12/14/19 3:10	TG
Aroclor-1260 [1]	51	6.5	mg/Kg dry	200		SW-846 8082A	12/12/19	12/14/19 3:10	TG
Aroclor-1262 [1]	ND	6.5	mg/Kg dry	200		SW-846 8082A	12/12/19	12/14/19 3:10	TG
Aroclor-1268 [1]	ND	6.5	mg/Kg dry	200		SW-846 8082A	12/12/19	12/14/19 3:10	TG
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
Decachlorobiphenyl [1]	*	30-150			S-01			12/14/19 3:10	
Decachlorobiphenyl [2]	*	30-150			S-01			12/14/19 3:10	
Tetrachloro-m-xylene [1]	*	30-150			S-01			12/14/19 3:10	
Tetrachloro-m-xylene [2]	*	30-150			S-01			12/14/19 3:10	



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Project Location: 240 Beaver St. Waltham, MA

Sample Description:

Work Order: 19L0400

Date Received: 12/10/2019

Field Sample #: Gp4-2 (6-8')

Sampled: 12/9/2019 08:40

Sample ID: 19L0400-09

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	61.7		% Wt	1		SM 2540G	12/11/19	12/11/19 15:06	adb

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### Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
19L0400-01 [Gp4-1 (3-5'')]	B248096	12/11/19
19L0400-02 [Gp4-2 (4-6'')]	B248096	12/11/19
19L0400-03 [Gp4-3 (4-6'')]	B248096	12/11/19
19L0400-04 [Gp4-4 (3-5'')]	B248096	12/11/19
19L0400-05 [Gp4-5 (6-8'')]	B248096	12/11/19
19L0400-06 [Gp4-6 (3-5'')]	B248096	12/11/19
19L0400-07 [Gp4-7 (3-5'')]	B248096	12/11/19
19L0400-08 [Gp4-9 (0-2'')]	B248096	12/11/19
19L0400-09 [Gp4-2 (6-8'')]	B248096	12/11/19

Prep Method: SW-846 3050B-SW-846 6010D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19L0400-01 [Gp4-1 (3-5'')]	B248351	1.51	50.0	12/13/19
19L0400-02 [Gp4-2 (4-6'')]	B248351	1.55	50.0	12/13/19
19L0400-03 [Gp4-3 (4-6'')]	B248351	1.52	50.0	12/13/19
19L0400-04 [Gp4-4 (3-5'')]	B248351	1.51	50.0	12/13/19
19L0400-05 [Gp4-5 (6-8'')]	B248351	1.52	50.0	12/13/19
19L0400-06 [Gp4-6 (3-5'')]	B248351	1.56	50.0	12/13/19
19L0400-07 [Gp4-7 (3-5'')]	B248351	1.55	50.0	12/13/19
19L0400-08 [Gp4-9 (0-2'')]	B248351	1.54	50.0	12/13/19

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19L0400-01 [Gp4-1 (3-5'')]	B248100	0.598	50.0	12/11/19
19L0400-02 [Gp4-2 (4-6'')]	B248100	0.592	50.0	12/11/19
19L0400-03 [Gp4-3 (4-6'')]	B248100	0.606	50.0	12/11/19
19L0400-04 [Gp4-4 (3-5'')]	B248100	0.591	50.0	12/11/19
19L0400-05 [Gp4-5 (6-8'')]	B248100	0.624	50.0	12/11/19
19L0400-06 [Gp4-6 (3-5'')]	B248100	0.591	50.0	12/11/19
19L0400-07 [Gp4-7 (3-5'')]	B248100	0.614	50.0	12/11/19
19L0400-08 [Gp4-9 (0-2'')]	B248100	0.605	50.0	12/11/19

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19L0400-09 [Gp4-2 (6-8'')]	B248210	10.0	10.0	12/12/19

Prep Method: SW-846 3546-SW-846 8270D-E

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19L0400-01 [Gp4-1 (3-5'')]	B248158	30.2	1.00	12/11/19
19L0400-02 [Gp4-2 (4-6'')]	B248158	30.0	1.00	12/11/19
19L0400-03 [Gp4-3 (4-6'')]	B248158	30.7	1.00	12/11/19
19L0400-04 [Gp4-4 (3-5'')]	B248158	30.5	1.00	12/11/19
19L0400-05 [Gp4-5 (6-8'')]	B248158	30.5	1.00	12/11/19
19L0400-06 [Gp4-6 (3-5'')]	B248158	30.4	1.00	12/11/19
19L0400-07 [Gp4-7 (3-5'')]	B248158	30.0	1.00	12/11/19
19L0400-08 [Gp4-9 (0-2'')]	B248158	30.2	1.00	12/11/19



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**Sample Extraction Data**

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248158 - SW-846 3546										
Blank (B248158-BLK1) Prepared: 12/11/19 Analyzed: 12/12/19										
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
4-Chloroaniline	ND	0.65	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
Chlorophenol	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.65	mg/Kg wet							
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Phthalene	ND	0.17	mg/Kg wet							
Strobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.65	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B248158 - SW-846 3546</b>										
<b>Blank (B248158-BLK1)</b>										
Prepared: 12/11/19 Analyzed: 12/12/19										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							V-05
Pyridine	ND	0.34	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	5.18		mg/Kg wet	6.60		78.5	30-130			
Surrogate: Phenol-d6	5.21		mg/Kg wet	6.60		79.0	30-130			
Surrogate: Nitrobenzene-d5	2.38		mg/Kg wet	3.30		72.2	30-130			
Surrogate: 2-Fluorobiphenyl	2.99		mg/Kg wet	3.30		90.6	30-130			
Surrogate: 2,4,6-Tribromophenol	4.45		mg/Kg wet	6.60		67.4	30-130			
Surrogate: p-Terphenyl-d14	2.40		mg/Kg wet	3.30		72.8	30-130			
<b>LCS (B248158-BS1)</b>										
Prepared: 12/11/19 Analyzed: 12/12/19										
Acenaphthene	1.18	0.17	mg/Kg wet	1.63		72.6	40-140			
Acenaphthylene	1.24	0.17	mg/Kg wet	1.63		76.2	40-140			
Acetophenone	1.19	0.33	mg/Kg wet	1.63		73.1	40-140			
Aniline	0.814	0.33	mg/Kg wet	1.63		50.0	40-140			
Anthracene	1.29	0.17	mg/Kg wet	1.63		79.1	40-140			
Benzo(a)anthracene	1.28	0.17	mg/Kg wet	1.63		78.7	40-140			
Benzo(a)pyrene	1.20	0.17	mg/Kg wet	1.63		73.9	40-140			
Benzo(b)fluoranthene	1.21	0.17	mg/Kg wet	1.63		74.2	40-140			
Benzo(g,h,i)perylene	1.20	0.17	mg/Kg wet	1.63		73.9	40-140			
Benzo(k)fluoranthene	1.24	0.17	mg/Kg wet	1.63		75.9	40-140			
Bis(2-chloroethoxy)methane	1.24	0.33	mg/Kg wet	1.63		75.9	40-140			
Bis(2-chloroethyl)ether	1.16	0.33	mg/Kg wet	1.63		71.5	40-140			
Bis(2-chloroisopropyl)ether	1.33	0.33	mg/Kg wet	1.63		81.8	40-140			
Bis(2-Ethylhexyl)phthalate	1.27	0.33	mg/Kg wet	1.63		78.2	40-140			
4-Bromophenylphenylether	1.30	0.33	mg/Kg wet	1.63		79.5	40-140			
Butylbenzylphthalate	1.31	0.33	mg/Kg wet	1.63		80.6	40-140			
4-Chloroaniline	0.991	0.64	mg/Kg wet	1.63		60.8	15-140			†
2-Chloronaphthalene	1.05	0.33	mg/Kg wet	1.63		64.3	40-140			
2-Chlorophenol	1.17	0.33	mg/Kg wet	1.63		72.1	30-130			
Chrysene	1.21	0.17	mg/Kg wet	1.63		74.2	40-140			
Dibenz(a,h)anthracene	1.15	0.17	mg/Kg wet	1.63		70.5	40-140			
Dibenzofuran	1.28	0.33	mg/Kg wet	1.63		78.3	40-140			
Di-n-butylphthalate	1.24	0.33	mg/Kg wet	1.63		76.3	40-140			
1,2-Dichlorobenzene	1.07	0.33	mg/Kg wet	1.63		65.6	40-140			
1,3-Dichlorobenzene	1.06	0.33	mg/Kg wet	1.63		64.9	40-140			
1,4-Dichlorobenzene	1.07	0.33	mg/Kg wet	1.63		65.7	40-140			
3,3-Dichlorobenzidine	1.07	0.17	mg/Kg wet	1.63		66.0	40-140			
2,4-Dichlorophenol	1.25	0.33	mg/Kg wet	1.63		76.7	30-130			
Diethylphthalate	1.23	0.33	mg/Kg wet	1.63		75.3	40-140			
2,4-Dimethylphenol	1.26	0.33	mg/Kg wet	1.63		77.4	30-130			
Dimethylphthalate	1.26	0.33	mg/Kg wet	1.63		77.3	40-140			
2,4-Dinitrophenol	0.420	0.64	mg/Kg wet	1.63		25.8	15-140			†
2,4-Dinitrotoluene	1.22	0.33	mg/Kg wet	1.63		74.8	40-140			
2,6-Dinitrotoluene	1.33	0.33	mg/Kg wet	1.63		82.0	40-140			
n-octylphthalate	1.31	0.33	mg/Kg wet	1.63		80.3	40-140			
2,2-Diphenylhydrazine/Azobenzene	1.27	0.33	mg/Kg wet	1.63		77.8	40-140			
Fluoranthene	1.23	0.17	mg/Kg wet	1.63		75.8	40-140			
Fluorene	1.23	0.17	mg/Kg wet	1.63		75.7	40-140			

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248158 - SW-846 3546										
LCS (B248158-BS1) Prepared: 12/11/19 Analyzed: 12/12/19										
Hexachlorobenzene	1.27	0.33	mg/Kg wet	1.63		77.9	40-140			
Hexachlorobutadiene	1.10	0.33	mg/Kg wet	1.63		67.7	40-140			
Hexachloroethane	1.06	0.33	mg/Kg wet	1.63		65.1	40-140			
Indeno(1,2,3-cd)pyrene	1.25	0.17	mg/Kg wet	1.63		76.5	40-140			
Isophorone	1.23	0.33	mg/Kg wet	1.63		75.8	40-140			
2-Methylnaphthalene	1.32	0.17	mg/Kg wet	1.63		80.9	40-140			
2-Methylphenol	1.15	0.33	mg/Kg wet	1.63		70.8	30-130			
3/4-Methylphenol	1.23	0.33	mg/Kg wet	1.63		75.6	30-130			
Naphthalene	1.17	0.17	mg/Kg wet	1.63		71.7	40-140			
Nitrobenzene	1.12	0.33	mg/Kg wet	1.63		68.7	40-140			
2-Nitrophenol	1.18	0.33	mg/Kg wet	1.63		72.6	30-130			
4-Nitrophenol	1.11	0.64	mg/Kg wet	1.63		68.4	15-140			†
Pentachlorophenol	0.955	0.33	mg/Kg wet	1.63		58.6	30-130			
Phenanthrene	1.29	0.17	mg/Kg wet	1.63		79.4	40-140			
Phenol	1.17	0.33	mg/Kg wet	1.63		71.5	15-140			†
Pyrene	1.18	0.17	mg/Kg wet	1.63		72.3	40-140			V-05
Pyridine	0.716	0.33	mg/Kg wet	1.63		43.9	30-140			†
1,2,4-Trichlorobenzene	1.14	0.33	mg/Kg wet	1.63		70.2	40-140			
1,3,5-Trichlorophenol	1.25	0.33	mg/Kg wet	1.63		76.6	30-130			
1,2,4,6-Trichlorophenol	1.25	0.33	mg/Kg wet	1.63		77.0	30-130			
Surrogate: 2-Fluorophenol	5.08		mg/Kg wet	6.51		78.0	30-130			
Surrogate: Phenol-d6	5.04		mg/Kg wet	6.51		77.4	30-130			
Surrogate: Nitrobenzene-d5	2.44		mg/Kg wet	3.26		74.9	30-130			
Surrogate: 2-Fluorobiphenyl	3.11		mg/Kg wet	3.26		95.4	30-130			
Surrogate: 2,4,6-Tribromophenol	5.37		mg/Kg wet	6.51		82.4	30-130			
Surrogate: p-Terphenyl-d14	2.63		mg/Kg wet	3.26		80.8	30-130			
LCS Dup (B248158-BS1) Prepared: 12/11/19 Analyzed: 12/12/19										
Acenaphthene	1.18	0.17	mg/Kg wet	1.66		71.6	40-140	0.144	30	
Acenaphthylene	1.25	0.17	mg/Kg wet	1.66		75.7	40-140	0.878	30	
Acetophenone	1.23	0.34	mg/Kg wet	1.66		74.5	40-140	3.59	30	
Aniline	0.841	0.34	mg/Kg wet	1.66		50.8	40-140	3.35	30	
Anthracene	1.30	0.17	mg/Kg wet	1.66		78.3	40-140	0.574	30	
Benzo(a)anthracene	1.31	0.17	mg/Kg wet	1.66		78.9	40-140	1.87	30	
Benzo(a)pyrene	1.25	0.17	mg/Kg wet	1.66		75.6	40-140	3.89	30	
Benzo(b)fluoranthene	1.26	0.17	mg/Kg wet	1.66		76.1	40-140	4.12	30	
Benzo(g,h,i)perylene	1.19	0.17	mg/Kg wet	1.66		71.7	40-140	1.46	30	
Benzo(k)fluoranthene	1.30	0.17	mg/Kg wet	1.66		78.6	40-140	5.14	30	
Bis(2-chloroethoxy)methane	1.30	0.34	mg/Kg wet	1.66		78.8	40-140	5.31	30	
Bis(2-chloroethyl)ether	1.22	0.34	mg/Kg wet	1.66		73.8	40-140	4.92	30	
Bis(2-chloroisopropyl)ether	1.39	0.34	mg/Kg wet	1.66		83.8	40-140	4.03	30	
Bis(2-Ethylhexyl)phthalate	1.37	0.34	mg/Kg wet	1.66		82.6	40-140	7.14	30	
4-Bromophenylphenylether	1.28	0.34	mg/Kg wet	1.66		77.0	40-140	1.55	30	
Butylbenzylphthalate	1.29	0.34	mg/Kg wet	1.66		77.8	40-140	1.97	30	
4-Chloroaniline	1.04	0.66	mg/Kg wet	1.66		62.7	15-140	4.59	30	†
2-Chloronaphthalene	1.09	0.34	mg/Kg wet	1.66		65.6	40-140	3.55	30	
4-Chlorophenol	1.23	0.34	mg/Kg wet	1.66		74.6	30-130	4.97	30	
1,2-Dichlorobenzene	1.30	0.17	mg/Kg wet	1.66		78.7	40-140	7.52	30	
Dibenz(a,h)anthracene	1.16	0.17	mg/Kg wet	1.66		70.1	40-140	0.959	30	
Dibenzofuran	1.29	0.34	mg/Kg wet	1.66		78.1	40-140	1.36	30	
Di-n-butylphthalate	1.30	0.34	mg/Kg wet	1.66		78.4	40-140	4.36	30	
1,2-Dichlorobenzene	1.12	0.34	mg/Kg wet	1.66		67.8	40-140	4.94	30	

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248158 - SW-846 3546										
LCS Dup (B248158-BSD1)					Prepared: 12/11/19 Analyzed: 12/12/19					
1,3-Dichlorobenzene	1.09	0.34	mg/Kg wet	1.66		65.7	40-140	2.87	30	
1,4-Dichlorobenzene	1.11	0.34	mg/Kg wet	1.66		67.3	40-140	4.08	30	
3,3-Dichlorobenzidine	1.05	0.17	mg/Kg wet	1.66		63.7	40-140	1.88	30	
2,4-Dichlorophenol	1.28	0.34	mg/Kg wet	1.66		77.2	30-130	2.29	30	
Diethylphthalate	1.25	0.34	mg/Kg wet	1.66		75.4	40-140	1.83	30	
2,4-Dimethylphenol	1.30	0.34	mg/Kg wet	1.66		78.6	30-130	3.18	30	
Dimethylphthalate	1.25	0.34	mg/Kg wet	1.66		75.3	40-140	0.980	30	
2,4-Dinitrophenol	0.430	0.66	mg/Kg wet	1.66		26.0	15-140	2.41	30	†
2,4-Dinitrotoluene	1.29	0.34	mg/Kg wet	1.66		77.8	40-140	5.52	30	
2,6-Dinitrotoluene	1.32	0.34	mg/Kg wet	1.66		79.9	40-140	0.853	30	
Di-n-octylphthalate	1.40	0.34	mg/Kg wet	1.66		84.6	40-140	6.88	30	
1,2-Diphenylhydrazine/Azobenzene	1.30	0.34	mg/Kg wet	1.66		78.6	40-140	2.72	30	
Fluoranthene	1.30	0.17	mg/Kg wet	1.66		78.3	40-140	4.86	30	
Fluorene	1.28	0.17	mg/Kg wet	1.66		77.6	40-140	4.07	30	
Hexachlorobenzene	1.26	0.34	mg/Kg wet	1.66		76.0	40-140	0.854	30	
Hexachlorobutadiene	1.16	0.34	mg/Kg wet	1.66		70.1	40-140	5.10	30	
Hexachloroethane	1.09	0.34	mg/Kg wet	1.66		66.0	40-140	2.95	30	
Indeno(1,2,3-cd)pyrene	1.25	0.17	mg/Kg wet	1.66		75.6	40-140	0.406	30	
Isophorone	1.32	0.34	mg/Kg wet	1.66		79.4	40-140	6.30	30	
Methylnaphthalene	1.41	0.17	mg/Kg wet	1.66		85.0	40-140	6.56	30	
Methylphenol	1.23	0.34	mg/Kg wet	1.66		74.3	30-130	6.44	30	
3/4-Methylphenol	1.29	0.34	mg/Kg wet	1.66		77.9	30-130	4.74	30	
Naphthalene	1.23	0.17	mg/Kg wet	1.66		74.3	40-140	5.15	30	
Nitrobenzene	1.22	0.34	mg/Kg wet	1.66		73.7	40-140	8.72	30	
2-Nitrophenol	1.26	0.34	mg/Kg wet	1.66		76.4	30-130	6.77	30	
4-Nitrophenol	1.18	0.66	mg/Kg wet	1.66		71.4	15-140	5.88	30	†
Pentachlorophenol	0.962	0.34	mg/Kg wet	1.66		58.1	30-130	0.751	30	
Phenanthrene	1.31	0.17	mg/Kg wet	1.66		79.4	40-140	1.67	30	
Phenol	1.21	0.34	mg/Kg wet	1.66		73.0	15-140	3.66	30	†
Pyrene	1.19	0.17	mg/Kg wet	1.66		71.8	40-140	0.976	30	V-05
Pyridine	0.733	0.34	mg/Kg wet	1.66		44.3	30-140	2.46	30	†
1,2,4-Trichlorobenzene	1.20	0.34	mg/Kg wet	1.66		72.8	40-140	5.17	30	
2,4,5-Trichlorophenol	1.28	0.34	mg/Kg wet	1.66		77.2	30-130	2.37	30	
2,4,6-Trichlorophenol	1.21	0.34	mg/Kg wet	1.66		73.3	30-130	3.26	30	
Surrogate: 2-Fluorophenol	5.17		mg/Kg wet	6.62		78.0	30-130			
Surrogate: Phenol-d6	5.20		mg/Kg wet	6.62		78.5	30-130			
Surrogate: Nitrobenzene-d5	2.52		mg/Kg wet	3.31		76.1	30-130			
Surrogate: 2-Fluorobiphenyl	2.98		mg/Kg wet	3.31		90.0	30-130			
Surrogate: 2,4,6-Tribromophenol	5.40		mg/Kg wet	6.62		81.5	30-130			
Surrogate: p-Terphenyl-d14	2.59		mg/Kg wet	3.31		78.1	30-130			
Matrix Spike (B248158-MS1)					Source: 19L0400-01 Prepared: 12/11/19 Analyzed: 12/12/19					
Acenaphthene	0.804	0.36	mg/Kg dry	1.76	ND	45.6	40-140			
Acenaphthylene	0.809	0.36	mg/Kg dry	1.76	ND	45.9	40-140			
Acetophenone	0.828	0.72	mg/Kg dry	1.76	ND	47.0	40-140			
Aniline	0.540	0.72	mg/Kg dry	1.76	ND	30.6	40-140			MS-09
Anthracene	0.870	0.36	mg/Kg dry	1.76	ND	49.4	40-140			
Benzo(a)anthracene	0.897	0.36	mg/Kg dry	1.76	ND	50.9	40-140			
Benzo(a)pyrene	0.870	0.36	mg/Kg dry	1.76	ND	49.4	40-140			
Benzo(b)fluoranthene	0.935	0.36	mg/Kg dry	1.76	ND	53.1	40-140			
Benzo(g,h,i)perylene	0.797	0.36	mg/Kg dry	1.76	ND	45.3	40-140			
Benzo(k)fluoranthene	0.830	0.36	mg/Kg dry	1.76	ND	47.1	40-140			

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B248158 - SW-846 3546										
Matrix Spike (B248158-MS1)		Source: 19L0400-01			Prepared: 12/11/19 Analyzed: 12/12/19					
Bis(2-chloroethoxy)methane	0.892	0.72	mg/Kg dry	1.76	ND	50.7	40-140			
Bis(2-chloroethyl)ether	0.858	0.72	mg/Kg dry	1.76	ND	48.7	40-140			
Bis(2-chloroisopropyl)ether	0.958	0.72	mg/Kg dry	1.76	ND	54.4	40-140			
Bis(2-Ethylhexyl)phthalate	1.04	0.72	mg/Kg dry	1.76	ND	59.2	40-140			
4-Bromophenylphenylether	0.783	0.72	mg/Kg dry	1.76	ND	44.4	40-140			
Butylbenzylphthalate	0.903	0.72	mg/Kg dry	1.76	ND	51.3	40-140			
4-Chloroaniline	0.628	1.4	mg/Kg dry	1.76	ND	35.6 *	40-140			MS-09
2-Chloronaphthalene	0.677	0.72	mg/Kg dry	1.76	ND	38.4 *	40-140			MS-22
2-Chlorophenol	0.802	0.72	mg/Kg dry	1.76	ND	45.5	30-130			
Chrysene	0.915	0.36	mg/Kg dry	1.76	ND	52.0	40-140			
Dibenz(a,h)anthracene	0.729	0.36	mg/Kg dry	1.76	ND	41.4	40-140			
Dibenzofuran	0.858	0.72	mg/Kg dry	1.76	ND	48.7	40-140			
Di-n-butylphthalate	0.896	0.72	mg/Kg dry	1.76	ND	50.9	40-140			
1,2-Dichlorobenzene	0.725	0.72	mg/Kg dry	1.76	ND	41.2	40-140			
1,3-Dichlorobenzene	0.704	0.72	mg/Kg dry	1.76	ND	40.0	40-140			
1,4-Dichlorobenzene	0.699	0.72	mg/Kg dry	1.76	ND	39.7 *	40-140			MS-22
3,3-Dichlorobenzidine	0.251	0.36	mg/Kg dry	1.76	ND	14.2 *	40-140			MS-09
2,4-Dichlorophenol	0.857	0.72	mg/Kg dry	1.76	ND	48.6	30-130			
Diethylphthalate	0.921	0.72	mg/Kg dry	1.76	ND	52.3	40-140			
2,4-Dimethylphenol	0.850	0.72	mg/Kg dry	1.76	ND	48.3	30-130			
Dimethylphthalate	0.859	0.72	mg/Kg dry	1.76	ND	48.8	40-140			
2,4-Dinitrophenol	0.710	1.4	mg/Kg dry	1.76	ND	40.3	30-130			
2,4-Dinitrotoluene	0.812	0.72	mg/Kg dry	1.76	ND	46.1	40-140			
2,6-Dinitrotoluene	0.859	0.72	mg/Kg dry	1.76	ND	48.8	40-140			
Di-n-octylphthalate	1.11	0.72	mg/Kg dry	1.76	ND	63.0	40-140			
1,2-Diphenylhydrazine/Azobenzene	0.839	0.72	mg/Kg dry	1.76	ND	47.6	40-140			
Fluoranthene	1.03	0.36	mg/Kg dry	1.76	ND	58.8	40-140			
Fluorene	0.870	0.36	mg/Kg dry	1.76	ND	49.4	40-140			
Hexachlorobenzene	0.684	0.72	mg/Kg dry	1.76	ND	38.8 *	40-140			MS-22
Hexachlorobutadiene	0.752	0.72	mg/Kg dry	1.76	ND	42.7	40-140			
Hexachloroethane	0.686	0.72	mg/Kg dry	1.76	ND	39.0 *	40-140			MS-09
Indeno(1,2,3-cd)pyrene	0.842	0.36	mg/Kg dry	1.76	ND	47.8	40-140			
Isophorone	0.905	0.72	mg/Kg dry	1.76	ND	51.4	40-140			
2-Methylnaphthalene	0.931	0.36	mg/Kg dry	1.76	ND	52.8	40-140			
2-Methylphenol	0.854	0.72	mg/Kg dry	1.76	ND	48.5	30-130			
3/4-Methylphenol	0.861	0.72	mg/Kg dry	1.76	ND	48.9	30-130			
Naphthalene	0.817	0.36	mg/Kg dry	1.76	ND	46.4	40-140			
Nitrobenzene	0.840	0.72	mg/Kg dry	1.76	ND	47.7	40-140			
2-Nitrophenol	0.797	0.72	mg/Kg dry	1.76	ND	45.3	30-130			
4-Nitrophenol	0.919	1.4	mg/Kg dry	1.76	ND	52.2	30-130			
Pentachlorophenol	0.528	0.72	mg/Kg dry	1.76	ND	30.0	30-130			
Phenanthrene	0.968	0.36	mg/Kg dry	1.76	ND	55.0	40-140			
Phenol	0.830	0.72	mg/Kg dry	1.76	ND	47.2	30-130			
Pyrene	0.980	0.36	mg/Kg dry	1.76	0.242	41.9	40-140			V-05
1,2,4-Trichlorobenzene	0.778	0.72	mg/Kg dry	1.76	ND	44.2	40-140			
2,4,5-Trichlorophenol	0.814	0.72	mg/Kg dry	1.76	ND	46.2	30-130			
2,6-Trichlorophenol	0.810	0.72	mg/Kg dry	1.76	ND	46.0	30-130			
Surrogate: 2-Fluorophenol	3.62		mg/Kg dry	7.04		51.4	30-130			
Surrogate: Phenol-d6	3.65		mg/Kg dry	7.04		51.8	30-130			
Surrogate: Nitrobenzene-d5	1.71		mg/Kg dry	3.52		48.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.07		mg/Kg dry	3.52		58.8	30-130			
Surrogate: 2,4,6-Tribromophenol	3.32		mg/Kg dry	7.04		47.2	30-130			

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B248158 - SW-846 3546</b>										
<b>Matrix Spike (B248158-MS1)</b>		<b>Source: 19L0400-01</b>		<b>Prepared: 12/11/19 Analyzed: 12/12/19</b>						
Surrogate: p-Terphenyl-d14	1.73		mg/Kg dry	3.52		49.1	30-130			
<b>Matrix Spike Dup (B248158-MSD1)</b>		<b>Source: 19L0400-01</b>		<b>Prepared: 12/11/19 Analyzed: 12/12/19</b>						
Acenaphthene	0.859	0.36	mg/Kg dry	1.76	ND	49.0	40-140	6.69	30	
Acenaphthylene	0.872	0.36	mg/Kg dry	1.76	ND	49.7	40-140	7.53	30	
Acetophenone	0.911	0.72	mg/Kg dry	1.76	ND	51.9	40-140	9.53	30	
Aniline	0.517	0.72	mg/Kg dry	1.76	ND	29.5	* 40-140	4.19	30	MS-09
Anthracene	0.917	0.36	mg/Kg dry	1.76	ND	52.2	40-140	5.26	30	
Benzo(a)anthracene	0.995	0.36	mg/Kg dry	1.76	ND	56.7	40-140	10.4	30	
Benzo(a)pyrene	0.961	0.36	mg/Kg dry	1.76	ND	54.8	40-140	9.96	30	
Benzo(b)fluoranthene	1.04	0.36	mg/Kg dry	1.76	ND	59.3	40-140	10.7	30	
Benzo(g,h,i)perylene	0.775	0.36	mg/Kg dry	1.76	ND	44.2	40-140	2.84	30	
Benzo(k)fluoranthene	0.894	0.36	mg/Kg dry	1.76	ND	51.0	40-140	7.50	30	
Bis(2-chloroethoxy)methane	0.949	0.72	mg/Kg dry	1.76	ND	54.1	40-140	6.16	30	
Bis(2-chloroethyl)ether	0.925	0.72	mg/Kg dry	1.76	ND	52.7	40-140	7.56	30	
Bis(2-chloroisopropyl)ether	1.04	0.72	mg/Kg dry	1.76	ND	59.2	40-140	8.05	30	
Bis(2-Ethylhexyl)phthalate	1.12	0.72	mg/Kg dry	1.76	ND	63.8	40-140	7.28	30	
4-Bromophenylphenylether	0.830	0.72	mg/Kg dry	1.76	ND	47.3	40-140	5.86	30	
tylbenzylphthalate	0.944	0.72	mg/Kg dry	1.76	ND	53.8	40-140	4.46	30	
1-Chloroaniline	0.661	1.4	mg/Kg dry	1.76	ND	37.6	* 40-140	5.13	30	MS-09
2-Chloronaphthalene	0.740	0.72	mg/Kg dry	1.76	ND	42.2	40-140	8.90	30	
2-Chlorophenol	0.891	0.72	mg/Kg dry	1.76	ND	50.8	30-130	10.6	30	
Chrysene	1.00	0.36	mg/Kg dry	1.76	ND	57.0	40-140	8.99	30	
Dibenz(a,h)anthracene	0.717	0.36	mg/Kg dry	1.76	ND	40.8	40-140	1.69	30	
Dibenzofuran	0.918	0.72	mg/Kg dry	1.76	ND	52.3	40-140	6.72	30	
Di-n-butylphthalate	0.951	0.72	mg/Kg dry	1.76	ND	54.2	40-140	5.99	30	
1,2-Dichlorobenzene	0.805	0.72	mg/Kg dry	1.76	ND	45.9	40-140	10.5	30	
1,3-Dichlorobenzene	0.779	0.72	mg/Kg dry	1.76	ND	44.4	40-140	10.0	30	
1,4-Dichlorobenzene	0.802	0.72	mg/Kg dry	1.76	ND	45.7	40-140	13.7	30	
3,3-Dichlorobenzidine	0.234	0.36	mg/Kg dry	1.76	ND	13.3	* 40-140		30	MS-09
2,4-Dichlorophenol	0.919	0.72	mg/Kg dry	1.76	ND	52.4	30-130	7.04	30	
Diethylphthalate	0.946	0.72	mg/Kg dry	1.76	ND	53.9	40-140	2.76	30	
2,4-Dimethylphenol	0.904	0.72	mg/Kg dry	1.76	ND	51.5	30-130	6.08	30	
Dimethylphthalate	0.913	0.72	mg/Kg dry	1.76	ND	52.0	40-140	6.02	30	
2,4-Dinitrophenol	0.697	1.4	mg/Kg dry	1.76	ND	39.7	30-130		30	
2,4-Dinitrotoluene	0.871	0.72	mg/Kg dry	1.76	ND	49.6	40-140	7.02	30	
2,6-Dinitrotoluene	0.939	0.72	mg/Kg dry	1.76	ND	53.5	40-140	8.98	30	
Di-n-octylphthalate	1.08	0.72	mg/Kg dry	1.76	ND	61.7	40-140	2.39	30	
1,2-Diphenylhydrazine/Azobenzene	0.866	0.72	mg/Kg dry	1.76	ND	49.3	40-140	3.13	30	
Fluoranthene	1.21	0.36	mg/Kg dry	1.76	ND	69.0	40-140	15.6	30	
Fluorene	0.939	0.36	mg/Kg dry	1.76	ND	53.5	40-140	7.60	30	
Hexachlorobenzene	0.739	0.72	mg/Kg dry	1.76	ND	42.1	40-140	7.68	30	
Hexachlorobutadiene	0.809	0.72	mg/Kg dry	1.76	ND	46.1	40-140	7.42	30	
Hexachloroethane	0.698	0.72	mg/Kg dry	1.76	ND	39.8	* 40-140	1.70	30	MS-09
Indeno(1,2,3-cd)pyrene	0.848	0.36	mg/Kg dry	1.76	ND	48.3	40-140	0.667	30	
Isophorone	0.981	0.72	mg/Kg dry	1.76	ND	55.9	40-140	8.02	30	
Methylnaphthalene	0.996	0.36	mg/Kg dry	1.76	ND	56.8	40-140	6.82	30	
Methylphenol	0.916	0.72	mg/Kg dry	1.76	ND	52.2	30-130	7.06	30	
3/4-Methylphenol	0.954	0.72	mg/Kg dry	1.76	ND	54.4	30-130	10.2	30	
Naphthalene	0.905	0.36	mg/Kg dry	1.76	ND	51.6	40-140	10.2	30	
Nitrobenzene	0.899	0.72	mg/Kg dry	1.76	ND	51.2	40-140	6.87	30	
2-Nitrophenol	0.850	0.72	mg/Kg dry	1.76	ND	48.4	30-130	6.41	30	

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B248158 - SW-846 3546

## Matrix Spike Dup (B248158-MSD1)

Source: 19L0400-01

Prepared: 12/11/19 Analyzed: 12/12/19

4-Nitrophenol	0.931	1.4	mg/Kg dry	1.76	ND	53.0	30-130	1.26	30	
Pentachlorophenol	0.713	0.72	mg/Kg dry	1.76	ND	40.6	30-130	29.8	30	
Phenanthrene	1.06	0.36	mg/Kg dry	1.76	ND	60.6	40-140	9.43	30	
Phenol	0.881	0.72	mg/Kg dry	1.76	ND	50.2	30-130	5.91	30	
Pyrene	1.13	0.36	mg/Kg dry	1.76	0.242	50.9	40-140	14.6	30	V-05
1,2,4-Trichlorobenzene	0.828	0.72	mg/Kg dry	1.76	ND	47.2	40-140	6.15	30	
2,4,5-Trichlorophenol	0.848	0.72	mg/Kg dry	1.76	ND	48.3	30-130	4.07	30	
2,4,6-Trichlorophenol	0.825	0.72	mg/Kg dry	1.76	ND	47.0	30-130	1.82	30	
Surrogate: 2-Fluorophenol	3.99		mg/Kg dry	7.02		56.9	30-130			
Surrogate: Phenol-d6	3.93		mg/Kg dry	7.02		55.9	30-130			
Surrogate: Nitrobenzene-d5	1.85		mg/Kg dry	3.51		52.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.18		mg/Kg dry	3.51		62.1	30-130			
Surrogate: 2,4,6-Tribromophenol	3.82		mg/Kg dry	7.02		54.5	30-130			
Surrogate: p-Terphenyl-d14	1.89		mg/Kg dry	3.51		53.9	30-130			





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## QUALITY CONTROL

## Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B248210 - SW-846 3546</b>										
<b>Blank (B248210-BLK1)</b>				Prepared: 12/12/19 Analyzed: 12/13/19						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.134		mg/Kg wet	0.200		66.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.121		mg/Kg wet	0.200		60.6	30-150			
Surrogate: Tetrachloro-m-xylene	0.126		mg/Kg wet	0.200		63.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.127		mg/Kg wet	0.200		63.5	30-150			
<b>LCS (B248210-BS1)</b>				Prepared: 12/12/19 Analyzed: 12/13/19						
Aroclor-1016	0.13	0.020	mg/Kg wet	0.200		66.9	40-140			
Aroclor-1016 [2C]	0.13	0.020	mg/Kg wet	0.200		63.0	40-140			
Aroclor-1260	0.13	0.020	mg/Kg wet	0.200		64.5	40-140			
Aroclor-1260 [2C]	0.11	0.020	mg/Kg wet	0.200		57.1	40-140			
Surrogate: Decachlorobiphenyl	0.143		mg/Kg wet	0.200		71.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.129		mg/Kg wet	0.200		64.7	30-150			
Surrogate: Tetrachloro-m-xylene	0.130		mg/Kg wet	0.200		64.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.130		mg/Kg wet	0.200		65.0	30-150			
<b>LCS Dup (B248210-BSD1)</b>				Prepared: 12/12/19 Analyzed: 12/13/19						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		71.3	40-140	6.44	30	
Aroclor-1016 [2C]	0.14	0.020	mg/Kg wet	0.200		68.5	40-140	8.38	30	
Aroclor-1260	0.14	0.020	mg/Kg wet	0.200		69.6	40-140	7.57	30	
Aroclor-1260 [2C]	0.12	0.020	mg/Kg wet	0.200		61.1	40-140	6.72	30	
Surrogate: Decachlorobiphenyl	0.150		mg/Kg wet	0.200		75.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.136		mg/Kg wet	0.200		68.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.141		mg/Kg wet	0.200		70.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.142		mg/Kg wet	0.200		70.8	30-150			

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## QUALITY CONTROL

## Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B248100 - SW-846 7471</b>										
<b>Blank (B248100-BLK1)</b> Prepared: 12/11/19 Analyzed: 12/12/19										
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B248100-BS1)</b> Prepared: 12/11/19 Analyzed: 12/12/19										
Mercury	6.65	0.39	mg/Kg wet	7.61		87.3	72.7-127.3			
<b>LCS Dup (B248100-BSD1)</b> Prepared: 12/11/19 Analyzed: 12/12/19										
Mercury	7.27	0.38	mg/Kg wet	7.61		95.5	72.7-127.3	8.91	20	
<b>Duplicate (B248100-DUP1)</b> Source: 19L0400-08 Prepared: 12/11/19 Analyzed: 12/12/19										
Mercury	ND	0.026	mg/Kg dry		ND			NC	35	
<b>Matrix Spike (B248100-MS1)</b> Source: 19L0400-08 Prepared: 12/11/19 Analyzed: 12/12/19										
Mercury	0.401	0.027	mg/Kg dry	0.358	ND	112	75-125			
<b>Batch B248351 - SW-846 3050B</b>										
<b>Blank (B248351-BLK1)</b> Prepared: 12/13/19 Analyzed: 12/16/19										
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
<b>LCS (B248351-BS1)</b> Prepared: 12/13/19 Analyzed: 12/16/19										
Antimony	118	4.8	mg/Kg wet	147		80.3	4.2-196.6			
Arsenic	144	4.8	mg/Kg wet	143		101	83.2-117.5			
Barium	440	4.8	mg/Kg wet	415		106	82.7-117.6			
Beryllium	182	0.48	mg/Kg wet	179		102	83.2-117.3			
Cadmium	55.9	0.48	mg/Kg wet	56.2		99.4	82.9-117.3			
Chromium	101	0.96	mg/Kg wet	101		100	82.4-116.8			
Lead	126	1.4	mg/Kg wet	125		101	82.4-116.8			
Nickel	111	0.96	mg/Kg wet	108		103	82.9-117.6			
Selenium	69.1	9.6	mg/Kg wet	77.9		88.7	79.3-120.7			
Silver	38.1	0.96	mg/Kg wet	34.3		111	81-119.2			
Thallium	114	4.8	mg/Kg wet	113		101	80.8-118.6			
Vanadium	82.8	1.9	mg/Kg wet	83.7		98.9	79.8-120.7			
Zinc	236	1.9	mg/Kg wet	240		98.3	80.8-118.8			

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## QUALITY CONTROL

## Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B248351 - SW-846 3050B</b>										
<b>LCS Dup (B248351-BSD1)</b>										
					Prepared: 12/13/19 Analyzed: 12/16/19					
Antimony	123	4.8	mg/Kg wet	147		84.0	4.2-196.6	4.54	30	
Arsenic	148	4.8	mg/Kg wet	143		104	83.2-117.5	2.84	30	
Barium	447	4.8	mg/Kg wet	415		108	82.7-117.6	1.57	20	
Beryllium	179	0.48	mg/Kg wet	179		100	83.2-117.3	1.42	30	
Cadmium	56.2	0.48	mg/Kg wet	56.2		100	82.9-117.3	0.580	20	
Chromium	104	0.97	mg/Kg wet	101		103	82.4-116.8	2.42	30	
Lead	128	1.5	mg/Kg wet	125		103	82.4-116.8	1.94	30	
Nickel	112	0.97	mg/Kg wet	108		103	82.9-117.6	0.519	30	
Selenium	70.1	9.7	mg/Kg wet	77.9		89.9	79.3-120.7	1.43	30	
Silver	38.6	0.97	mg/Kg wet	34.3		113	81-119.2	1.37	30	
Thallium	125	4.8	mg/Kg wet	113		111	80.8-118.6	9.17	30	
Vanadium	85.4	1.9	mg/Kg wet	83.7		102	79.8-120.7	3.03	30	
Zinc	240	1.9	mg/Kg wet	240		100	80.8-118.8	1.65	30	
<b>Duplicate (B248351-DUP1)</b>										
			Source: 19L0400-01		Prepared: 12/13/19 Analyzed: 12/16/19					
Antimony	ND	1.7	mg/Kg dry		ND			NC	35	
Arsenic	10.8	1.7	mg/Kg dry		11.6			7.58	35	
Barium	38.3	1.7	mg/Kg dry		36.9			3.53	35	
Beryllium	0.369	0.17	mg/Kg dry		0.366			1.04	35	
Cadmium	0.225	0.17	mg/Kg dry		0.254			12.2	35	
Chromium	36.0	0.35	mg/Kg dry		31.1			14.6	35	
Lead	53.5	0.52	mg/Kg dry		45.7			15.8	35	
Nickel	23.6	0.35	mg/Kg dry		22.4			5.58	35	
Selenium	ND	3.5	mg/Kg dry		ND			NC	35	
Silver	ND	0.35	mg/Kg dry		ND			NC	35	
Thallium	ND	1.7	mg/Kg dry		ND			NC	35	
Vanadium	58.7	0.70	mg/Kg dry		55.8			5.08	35	
Zinc	62.2	0.70	mg/Kg dry		57.5			7.93	35	
<b>Matrix Spike (B248351-MS1)</b>										
			Source: 19L0400-01		Prepared: 12/13/19 Analyzed: 12/16/19					
Antimony	5.29	1.7	mg/Kg dry	17.1	ND	30.9 *	75-125			MS-07
Arsenic	28.6	1.7	mg/Kg dry	17.1	11.6	99.2	75-125			
Barium	55.0	1.7	mg/Kg dry	17.1	36.9	106	75-125			
Beryllium	16.1	0.17	mg/Kg dry	17.1	0.366	91.9	75-125			
Cadmium	15.7	0.17	mg/Kg dry	17.1	0.254	90.1	75-125			
Chromium	50.1	0.34	mg/Kg dry	17.1	31.1	111	75-125			
Lead	63.8	0.51	mg/Kg dry	17.1	45.7	106	75-125			
Nickel	40.6	0.34	mg/Kg dry	17.1	22.4	106	75-125			
Selenium	12.4	3.4	mg/Kg dry	17.1	ND	72.3 *	75-125			MS-07
Silver	16.5	0.34	mg/Kg dry	17.1	ND	96.3	75-125			
Thallium	18.8	1.7	mg/Kg dry	17.1	ND	110	75-125			
Vanadium	76.3	0.68	mg/Kg dry	17.1	55.8	120	75-125			
Zinc	91.5	0.68	mg/Kg dry	34.2	57.5	99.5	75-125			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B248351 - SW-846 3050B

Reference (B248351-SRM1)

Prepared: 12/13/19 Analyzed: 12/16/19

Lead	0.450	0.50	mg/Kg wet	0.495		90.8	80-120			
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## QUALITY CONTROL

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B248096 - % Solids</b>										
<b>Duplicate (B248096-DUP1)</b>										
<b>Source: 19L0400-01</b>			<b>Prepared &amp; Analyzed: 12/11/19</b>							
% Solids	94.1		% Wt		94.3			0.253	20	
<b>Duplicate (B248096-DUP2)</b>										
<b>Source: 19L0400-02</b>			<b>Prepared &amp; Analyzed: 12/11/19</b>							
% Solids	93.4		% Wt		90.8			2.78	20	
<b>Duplicate (B248096-DUP3)</b>										
<b>Source: 19L0400-03</b>			<b>Prepared &amp; Analyzed: 12/11/19</b>							
% Solids	92.2		% Wt		93.9			1.82	20	
<b>Duplicate (B248096-DUP4)</b>										
<b>Source: 19L0400-04</b>			<b>Prepared &amp; Analyzed: 12/11/19</b>							
% Solids	76.8		% Wt		77.4			0.750	20	

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**  
*SW-846 8082A*

Gp4-2 (6-8')

Lab Sample ID: 19L0400-09 Date(s) Analyzed: 12/14/2019 12/14/2019  
Instrument ID (1): ECD10 Instrument ID (2): ECD10  
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	13	
	2	0.000	0.000	0.000	15	14.3
Aroclor-1260	1	0.000	0.000	0.000	51	
	2	0.000	0.000	0.000	46	10.3

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*SW-846 8082A*

LCS

Lab Sample ID: B248210-BS1 Date(s) Analyzed: 12/13/2019 12/13/2019

Instrument ID (1): ECD10 Instrument ID (2): ECD10

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.13	
	2	0.000	0.000	0.000	0.13	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.13	
	2	0.000	0.000	0.000	0.11	16.7

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B248210-BSD1 Date(s) Analyzed: 12/13/2019 12/13/2019

Instrument ID (1): ECD10 Instrument ID (2): ECD10

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.14	
	2	0.000	0.000	0.000	0.14	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.14	
	2	0.000	0.000	0.000	0.12	15.4



# FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-09	Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
RL-08	Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b><i>SW-846 6010D in Soil</i></b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b><i>SW-846 7471B in Soil</i></b>	
Mercury	CT,NH,NY,NC,ME,VA
<b><i>SW-846 8082A in Soil</i></b>	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
<b><i>SW-846 8082A in Water</i></b>	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA

# CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<b>SW-846 8082A in Water</b>	
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
<b>SW-846 8270D-E in Soil</b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY,NH
Aniline	NY,NH
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine/Azobenzene	NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH

# CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D-E in Soil</i>	
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<i>SW-846 8270D-E in Water</i>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,NY,NH

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D-E in Water</i>	
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine/Azobenzene	NY
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020



I Have Not Confirmed Sample Container  
Numbers With Lab Staff Before Relinquishing  
Over Samples \_\_\_\_\_



**con-test®**  
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False  
Statement will be brought to the attention of the Client - State True or False

Client CDW  
Received By BSR Date 12/10/19 Time 2030

How were the samples received? In Cooler T No Cooler \_\_\_\_\_ On Ice T No Ice \_\_\_\_\_  
Direct from Sampling \_\_\_\_\_ Ambient \_\_\_\_\_ Melted Ice \_\_\_\_\_

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 4.1  
By Blank # \_\_\_\_\_ Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? na Were Samples Tampered with? na  
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T  
Did COC include all Client T Analysis T Sampler Name T  
pertinent Information? Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? F

Are there Lab to Filters? F Who was notified? \_\_\_\_\_  
Are there Rushes? F Who was notified? \_\_\_\_\_  
Are there Short Holds? F Who was notified? \_\_\_\_\_

Is there enough Volume? T

Is there Headspace where applicable? na MS/MSD? F  
Is splitting samples required? F

Proper Media/Containers Used? T On COC? F

Were trip blanks received? F Acid na Base na

Do all samples have the proper pH?

Containers	Containers	Containers
Unp-	1 Liter Amb.	1 Liter Plastic
HCL-	500 mL Amb.	500 mL Plastic
Meoh-	250 mL Amb.	250 mL Plastic
Bisulfate-	Flashpoint	Col./Bacteria
DI-	Other Glass	Other Plastic
Thiosulfate-	SOC Kit	Plastic Bag
Sulfuric-	Perchlorate	Ziplock
		Frozen:

Containers	Containers	Containers
Unp-	1 Liter Amb.	1 Liter Plastic
HCL-	500 mL Amb.	500 mL Plastic
Meoh-	250 mL Amb.	250 mL Plastic
Bisulfate-	Col./Bacteria	Flashpoint
DI-	Other Plastic	Other Glass
Thiosulfate-	SOC Kit	Plastic Bag
Sulfuric-	Perchlorate	Ziplock
		Frozen:

Comments:



## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory

Project #: 19L0400

Project Location: 240 Beaver St. Waltham, MA

RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

19L0400-01 thru 19L0400-09

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
----------	---	--

**Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

**I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.**

Signature:

Lisa Worthington

Position:

Technical Representative

Printed Name:

Lisa A. Worthington

Date:

12/17/19



December 3, 2019

Alan Sundquist  
CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760

Project Location: Beaver St., Waltham, MA  
Client Job Number:  
Project Number: 1552  
Laboratory Work Order Number: 19K1404

Enclosed are results of analyses for samples received by the laboratory on November 22, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Michelle M. Koch  
Project Manager

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CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760  
ATTN: Alan Sundquist

REPORT DATE: 12/3/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1552

### ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19K1404

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Beaver St., Waltham, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
HB-16	19K1404-01	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-17	19K1404-02	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-19	19K1404-03	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-20	19K1404-04	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-22	19K1404-05	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-23	19K1404-06	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-24	19K1404-07	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-25	19K1404-08	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-26	19K1404-09	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-27	19K1404-10	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.



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SW-846 6010D

**Qualifications:****MS-07**

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

**Analyte & Samples(s) Qualified:****Antimony**

19K1404-01[HB-16], B247118-MS1

SW-846 7471B

**Qualifications:****R-05**

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

**Analyte & Samples(s) Qualified:****Mercury**

B247114-BSD1

SW-846 8270D-E

**Qualifications:****L-04**

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

**Analyte & Samples(s) Qualified:****Benzoic Acid**

19K1404-01[HB-16], 19K1404-02[HB-17], 19K1404-03[HB-19], 19K1404-04[HB-20], 19K1404-05[HB-22], 19K1404-06[HB-23], 19K1404-07[HB-24], 19K1404-08[HB-25], 19K1404-09[HB-26], 19K1404-10[HB-27], B246869-BLK1, B246869-BS1, B246869-BSD1

**V-04**

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

**Analyte & Samples(s) Qualified:****2,4-Dinitrophenol**

19K1404-09[HB-26], 19K1404-10[HB-27]

**Benzidine**

19K1404-01[HB-16], 19K1404-02[HB-17], 19K1404-03[HB-19], 19K1404-04[HB-20], 19K1404-05[HB-22], 19K1404-06[HB-23], 19K1404-07[HB-24], 19K1404-08[HB-25], B246869-BLK1, B246869-BS1, B246869-BSD1

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:****Benzidine**

19K1404-01[HB-16], 19K1404-02[HB-17], 19K1404-03[HB-19], 19K1404-04[HB-20], 19K1404-05[HB-22], 19K1404-06[HB-23], 19K1404-07[HB-24], 19K1404-08[HB-25], 19K1404-09[HB-26], 19K1404-10[HB-27], B246869-BLK1, B246869-BS1, B246869-BSD1

**Hexachlorocyclopentadiene**

19K1404-01[HB-16], 19K1404-02[HB-17], 19K1404-03[HB-19], 19K1404-04[HB-20], 19K1404-05[HB-22], 19K1404-06[HB-23], 19K1404-07[HB-24], 19K1404-08[HB-25], B246869-BLK1, B246869-BS1, B246869-BSD1

**Pentachlorophenol**

19K1404-01[HB-16], 19K1404-02[HB-17], 19K1404-03[HB-19], 19K1404-04[HB-20], 19K1404-05[HB-22], 19K1404-06[HB-23], 19K1404-07[HB-24], 19K1404-08[HB-25], B246869-BLK1, B246869-BS1, B246869-BSD1

**V-20**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

**Analyte & Samples(s) Qualified:****2,4-Dinitrophenol**

19K1404-09[HB-26], 19K1404-10[HB-27]

**V-34**

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

**Analyte & Samples(s) Qualified:****4-chloroaniline**

19K1404-01[HB-16], 19K1404-02[HB-17], 19K1404-03[HB-19], 19K1404-04[HB-20], 19K1404-05[HB-22], 19K1404-06[HB-23], 19K1404-07[HB-24], 19K1404-08[HB-25], B246869-BLK1, B246869-BS1, B246869-BSD1



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Y-35

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

**Analyte & Samples(s) Qualified:**

**2-Nitroaniline**

19K1404-09[HB-26], 19K1404-10[HB-27]

**Benzidine**

19K1404-01[HB-16], 19K1404-02[HB-17], 19K1404-03[HB-19], 19K1404-04[HB-20], 19K1404-05[HB-22], 19K1404-06[HB-23], 19K1404-07[HB-24], 19K1404-08[HB-25], B246869-BLK1, B246869-BS1, B246869-BSD1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington". The signature is fluid and cursive, with a large, stylized initial "L".

Lisa A. Worthington

Technical Representative



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-16

Sampled: 11/20/2019 14:00

Sample ID: 19K1404-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Acenaphthylene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Acetophenone	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Aniline	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Benzidine	ND	1.2	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Benzo(a)anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Benzo(a)pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Benzo(b)fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Benzo(g,h,i)perylene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Benzo(k)fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Benzoic Acid	ND	1.8	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Bis(2-chloroethoxy)methane	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Bis(2-chloroethyl)ether	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Bis(2-chloroisopropyl)ether	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
4-Bromophenylphenylether	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Butylbenzylphthalate	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Carbazole	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
4-Chloroaniline	ND	1.2	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
4-Chloro-3-methylphenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2-Chloronaphthalene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2-Chlorophenol	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
4-Chlorophenylphenylether	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Chrysene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Dibenz(a,h)anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Dibenzofuran	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Di-n-butylphthalate	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
1,2-Dichlorobenzene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
1,3-Dichlorobenzene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
1,4-Dichlorobenzene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
3,3-Dichlorobenzidine	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2,4-Dichlorophenol	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Diethylphthalate	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2,4-Dimethylphenol	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Dimethylphthalate	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
4,6-Dinitro-2-methylphenol	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2,4-Dinitrophenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2,4-Dinitrotoluene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2,6-Dinitrotoluene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Di-n-octylphthalate	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Fluorene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-16

Sampled: 11/20/2019 14:00

Sample ID: 19K1404-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Hexachlorobutadiene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Hexachlorocyclopentadiene	ND	0.61	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Hexachloroethane	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Indeno(1,2,3-cd)pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Isophorone	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
1-Methylnaphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2-Methylnaphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2-Methylphenol	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
3/4-Methylphenol	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Naphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2-Nitroaniline	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
3-Nitroaniline	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
4-Nitroaniline	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Nitrobenzene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2-Nitrophenol	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
4-Nitrophenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
N-Nitrosodimethylamine	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
N-Nitrosodi-n-propylamine	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Pentachloronitrobenzene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Pentachlorophenol	ND	0.61	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Phenanthrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Phenol	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Pyridine	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
1,2,4-Trichlorobenzene	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2,4,5-Trichlorophenol	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
2,4,6-Trichlorophenol	ND	0.61	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:17	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	68.6	30-130						11/27/19 22:17	
Phenol-d6	68.9	30-130						11/27/19 22:17	
Nitrobenzene-d5	66.4	30-130						11/27/19 22:17	
2-Fluorobiphenyl	69.6	30-130						11/27/19 22:17	
2,4,6-Tribromophenol	73.3	30-130						11/27/19 22:17	
p-Terphenyl-d14	92.5	30-130						11/27/19 22:17	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-16

Sampled: 11/20/2019 14:00

Sample ID: 19K1404-01

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.0	mg/Kg dry	1	MS-07	SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Arsenic	8.1	3.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Barium	64	3.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Beryllium	0.49	0.30	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Cadmium	ND	0.30	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Chromium	14	0.60	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Lead	87	0.90	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Mercury	0.11	0.044	mg/Kg dry	1		SW-846 7471B	11/26/19	11/27/19 9:47	CJV
Nickel	9.8	0.60	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Selenium	ND	6.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Silver	ND	0.60	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Thallium	ND	3.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Vanadium	37	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:20	MJH
Zinc	70	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 16:41	TBC

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-16

Sampled: 11/20/2019 14:00

Sample ID: 19K1404-01

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	55.8		% Wt	1		SM 2540G	11/25/19	11/26/19 10:38	adb

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-17

Sampled: 11/20/2019 15:00

Sample ID: 19K1404-02

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Acenaphthylene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Acetophenone	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Aniline	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Benzidine	ND	1.1	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Benzo(a)anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Benzo(a)pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Benzo(b)fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Benzo(g,h,i)perylene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Benzo(k)fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Benzoic Acid	ND	1.7	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Bis(2-chloroethoxy)methane	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Bis(2-chloroethyl)ether	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Bis(2-chloroisopropyl)ether	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
4-Bromophenylphenylether	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
3-tylbenzylphthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Carbazole	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
4-Chloroaniline	ND	1.1	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
4-Chloro-3-methylphenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2-Chloronaphthalene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2-Chlorophenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
4-Chlorophenylphenylether	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Chrysene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Dibenz(a,h)anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Dibenzofuran	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Di-n-butylphthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
1,2-Dichlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
1,3-Dichlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
1,4-Dichlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
3,3-Dichlorobenzidine	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2,4-Dichlorophenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Diethylphthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2,4-Dimethylphenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Dimethylphthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
4,6-Dinitro-2-methylphenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2,4-Dinitrophenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2,4-Dinitrotoluene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2,6-Dinitrotoluene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Di-n-octylphthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Fluorene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-17

Sampled: 11/20/2019 15:00

Sample ID: 19K1404-02

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Hexachlorobutadiene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Hexachlorocyclopentadiene	ND	0.59	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Hexachloroethane	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Indeno(1,2,3-cd)pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Isophorone	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
1-Methylnaphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2-Methylnaphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2-Methylphenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
3/4-Methylphenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Naphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2-Nitroaniline	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
3-Nitroaniline	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
4-Nitroaniline	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Nitrobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2-Nitrophenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
4-Nitrophenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
N-Nitrosodimethylamine	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
N-Nitrosodi-n-propylamine	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Pentachloronitrobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Pentachlorophenol	ND	0.59	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Phenanthrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Phenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Pyridine	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
1,2,4-Trichlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2,4,5-Trichlorophenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
2,4,6-Trichlorophenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 22:40	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorophenol	69.6		30-130				11/27/19 22:40		
Phenol-d6	69.9		30-130				11/27/19 22:40		
Nitrobenzene-d5	66.8		30-130				11/27/19 22:40		
2-Fluorobiphenyl	67.8		30-130				11/27/19 22:40		
2,4,6-Tribromophenol	74.3		30-130				11/27/19 22:40		
p-Terphenyl-d14	87.2		30-130				11/27/19 22:40		

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-17

Sampled: 11/20/2019 15:00

Sample ID: 19K1404-02

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Arsenic	6.8	2.9	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Barium	56	2.9	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Beryllium	0.45	0.29	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Cadmium	0.29	0.29	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Chromium	13	0.58	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Lead	93	0.87	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Mercury	0.12	0.046	mg/Kg dry	1		SW-846 7471B	11/26/19	11/27/19 9:48	CJV
Nickel	9.4	0.58	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Selenium	ND	5.8	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Silver	ND	0.58	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Vanadium	37	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:26	MJH
Zinc	60	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 16:46	TBC

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-17

Sampled: 11/20/2019 15:00

Sample ID: 19K1404-02

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	56.6		% Wt	1		SM 2540G	11/25/19	11/26/19 10:38	adb



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-19

Sampled: 11/21/2019 08:30

Sample ID: 19K1404-03

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Acenaphthylene	ND	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Acetophenone	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Aniline	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Anthracene	ND	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Benzidine	ND	0.98	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Benzo(a)anthracene	0.51	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Benzo(a)pyrene	0.60	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Benzo(b)fluoranthene	0.81	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Benzo(g,h,i)perylene	0.43	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Benzo(k)fluoranthene	0.31	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Benzoic Acid	ND	1.5	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Bis(2-chloroethoxy)methane	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Bis(2-chloroethyl)ether	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Bis(2-chloroisopropyl)ether	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
4-Bromophenylphenylether	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Butylbenzylphthalate	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Carbazole	ND	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
4-Chloroaniline	ND	0.98	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
4-Chloro-3-methylphenol	ND	0.98	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2-Chloronaphthalene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2-Chlorophenol	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
4-Chlorophenylphenylether	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Chrysene	0.66	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Dibenz(a,h)anthracene	ND	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Dibenzofuran	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Di-n-butylphthalate	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
1,2-Dichlorobenzene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
1,3-Dichlorobenzene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
1,4-Dichlorobenzene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
3,3-Dichlorobenzidine	ND	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2,4-Dichlorophenol	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Diethylphthalate	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2,4-Dimethylphenol	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Dimethylphthalate	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2,4-Dinitrophenol	ND	0.98	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2,4-Dinitrotoluene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2,6-Dinitrotoluene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Di-n-octylphthalate	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2,2-Diphenylhydrazine/Azobenzene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Fluoranthene	1.1	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Fluorene	ND	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-19

Sampled: 11/21/2019 08:30

Sample ID: 19K1404-03

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Hexachlorobutadiene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Hexachlorocyclopentadiene	ND	0.50	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Hexachloroethane	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Indeno(1,2,3-cd)pyrene	0.50	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Isophorone	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
1-Methylnaphthalene	ND	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2-Methylnaphthalene	ND	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2-Methylphenol	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
3/4-Methylphenol	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Naphthalene	ND	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2-Nitroaniline	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
3-Nitroaniline	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
4-Nitroaniline	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Nitrobenzene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2-Nitrophenol	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
4-Nitrophenol	ND	0.98	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
N-Nitrosodimethylamine	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
N-Nitrosodi-n-propylamine	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Pentachloronitrobenzene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Pentachlorophenol	ND	0.50	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Phenanthrene	0.54	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Phenol	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Pyrene	1.3	0.25	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Pyridine	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
1,2,4-Trichlorobenzene	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2,4,5-Trichlorophenol	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
2,4,6-Trichlorophenol	ND	0.50	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:03	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	66.5	30-130						11/27/19 23:03	
Phenol-d6	68.7	30-130						11/27/19 23:03	
Nitrobenzene-d5	66.6	30-130						11/27/19 23:03	
2-Fluorobiphenyl	68.9	30-130						11/27/19 23:03	
2,4,6-Tribromophenol	72.8	30-130						11/27/19 23:03	
p-Terphenyl-d14	87.2	30-130						11/27/19 23:03	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-19

Sampled: 11/21/2019 08:30

Sample ID: 19K1404-03

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Arsenic	6.9	2.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Barium	40	2.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Beryllium	0.31	0.25	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Cadmium	0.57	0.25	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Chromium	26	0.49	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Lead	350	0.74	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Mercury	0.11	0.038	mg/Kg dry	1		SW-846 7471B	11/26/19	11/27/19 9:50	CJV
Nickel	16	0.49	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Selenium	ND	4.9	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Silver	ND	0.49	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Thallium	ND	2.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Vanadium	35	0.99	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:33	MJH
Zinc	110	0.99	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 16:51	TBC

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-19

Sampled: 11/21/2019 08:30

Sample ID: 19K1404-03

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	67.0		% Wt	1		SM 2540G	11/25/19	11/26/19 10:38	adb

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-20

Sampled: 11/21/2019 09:00

Sample ID: 19K1404-04

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Acenaphthylene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Acetophenone	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Aniline	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Anthracene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Benzidine	ND	1.4	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Benzo(a)anthracene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Benzo(a)pyrene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Benzo(b)fluoranthene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Benzo(g,h,i)perylene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Benzo(k)fluoranthene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Benzoic Acid	ND	2.1	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Bis(2-chloroethoxy)methane	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Bis(2-chloroethyl)ether	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Bis(2-chloroisopropyl)ether	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
4-Bromophenylphenylether	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Butylbenzylphthalate	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Carbazole	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
4-Chloroaniline	ND	1.4	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
4-Chloro-3-methylphenol	ND	1.4	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2-Chloronaphthalene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2-Chlorophenol	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
4-Chlorophenylphenylether	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Chrysene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Dibenz(a,h)anthracene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Dibenzofuran	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Di-n-butylphthalate	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
1,2-Dichlorobenzene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
1,3-Dichlorobenzene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
1,4-Dichlorobenzene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
3,3-Dichlorobenzidine	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2,4-Dichlorophenol	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Diethylphthalate	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2,4-Dimethylphenol	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Dimethylphthalate	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
4,6-Dinitro-2-methylphenol	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2,4-Dinitrotoluene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2,6-Dinitrotoluene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Di-n-octylphthalate	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2,2-Diphenylhydrazine/Azobenzene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Fluoranthene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Fluorene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-20

Sampled: 11/21/2019 09:00

Sample ID: 19K1404-04

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Hexachlorobutadiene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Hexachlorocyclopentadiene	ND	0.72	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Hexachloroethane	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Indeno(1,2,3-cd)pyrene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Isophorone	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
1-Methylnaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2-Methylnaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2-Methylphenol	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
3/4-Methylphenol	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Naphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2-Nitroaniline	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
3-Nitroaniline	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
4-Nitroaniline	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Nitrobenzene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2-Nitrophenol	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
4-Nitrophenol	ND	1.4	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
N-Nitrosodimethylamine	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
N-Nitrosodi-n-propylamine	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Pentachloronitrobenzene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Pentachlorophenol	ND	0.72	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Phenanthrene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Phenol	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Pyrene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Pyridine	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
1,2,4-Trichlorobenzene	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2,4,5-Trichlorophenol	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
2,4,6-Trichlorophenol	ND	0.72	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:26	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	63.5	30-130						11/27/19 23:26	
Phenol-d6	68.9	30-130						11/27/19 23:26	
Nitrobenzene-d5	67.4	30-130						11/27/19 23:26	
2-Fluorobiphenyl	71.3	30-130						11/27/19 23:26	
2,4,6-Tribromophenol	76.6	30-130						11/27/19 23:26	
p-Terphenyl-d14	96.6	30-130						11/27/19 23:26	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-20

Sampled: 11/21/2019 09:00

Sample ID: 19K1404-04

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Arsenic	7.3	3.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Barium	110	3.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Beryllium	0.66	0.35	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Cadmium	0.42	0.35	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Chromium	14	0.70	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Lead	71	1.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Mercury	0.10	0.055	mg/Kg dry	1		SW-846 7471B	11/26/19	11/27/19 9:56	CJV
Nickel	11	0.70	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Selenium	ND	7.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Silver	ND	0.70	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Thallium	ND	3.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Vanadium	38	1.4	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 3:39	MJH
Zinc	63	1.4	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 16:57	TBC

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-20

Sampled: 11/21/2019 09:00

Sample ID: 19K1404-04

Sample Matrix: Soil

**Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	46.3		% Wt	1		SM 2540G	11/25/19	11/26/19 10:38	adb



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-22

Sampled: 11/21/2019 10:30

Sample ID: 19K1404-05

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Acenaphthylene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Acetophenone	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Aniline	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Anthracene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Benzidine	ND	1.2	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Benzo(a)anthracene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Benzo(a)pyrene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Benzo(b)fluoranthene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Benzo(g,h,i)perylene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Benzo(k)fluoranthene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Benzoic Acid	ND	1.9	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Bis(2-chloroethoxy)methane	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Bis(2-chloroethyl)ether	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Bis(2-chloroisopropyl)ether	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
4-Bromophenylphenylether	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Butylbenzylphthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Carbazole	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
4-Chloroaniline	ND	1.2	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
4-Chloro-3-methylphenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2-Chloronaphthalene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2-Chlorophenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
4-Chlorophenylphenylether	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Chrysene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Dibenz(a,h)anthracene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Dibenzofuran	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Di-n-butylphthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
1,2-Dichlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
1,3-Dichlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
1,4-Dichlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
3,3-Dichlorobenzidine	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2,4-Dichlorophenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Diethylphthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2,4-Dimethylphenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Dimethylphthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
4,6-Dinitro-2-methylphenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2,4-Dinitrophenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2,4-Dinitrotoluene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2,6-Dinitrotoluene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Di-n-octylphthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Fluoranthene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Fluorene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-22

Sampled: 11/21/2019 10:30

Sample ID: 19K1404-05

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Hexachlorobutadiene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Hexachlorocyclopentadiene	ND	0.63	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Hexachloroethane	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Indeno(1,2,3-cd)pyrene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Isophorone	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
1-Methylnaphthalene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2-Methylnaphthalene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2-Methylphenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
3/4-Methylphenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Naphthalene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2-Nitroaniline	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
3-Nitroaniline	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
4-Nitroaniline	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Nitrobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2-Nitrophenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
4-Nitrophenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
N-Nitrosodimethylamine	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
N-Nitrosodi-n-propylamine	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Pentachloronitrobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Pentachlorophenol	ND	0.63	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Phenanthrene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Phenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Pyrene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
Pyridine	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
1,2,4-Trichlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2,4,5-Trichlorophenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB
2,4,6-Trichlorophenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:49	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	69.7	30-130	11/27/19 23:49
Phenol-d6	72.7	30-130	11/27/19 23:49
Nitrobenzene-d5	72.5	30-130	11/27/19 23:49
2-Fluorobiphenyl	76.8	30-130	11/27/19 23:49
2,4,6-Tribromophenol	81.4	30-130	11/27/19 23:49
p-Terphenyl-d14	105	30-130	11/27/19 23:49

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-22

Sampled: 11/21/2019 10:30

Sample ID: 19K1404-05

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Arsenic	5.4	3.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Barium	70	3.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Beryllium	0.81	0.32	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Cadmium	0.41	0.32	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Chromium	13	0.63	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Lead	45	0.95	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Mercury	0.11	0.045	mg/Kg dry	1		SW-846 7471B	11/26/19	11/27/19 9:57	CJV
Nickel	10	0.63	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Selenium	ND	6.3	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Silver	ND	0.63	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Thallium	ND	3.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Vanadium	41	1.3	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:02	MJH
Zinc	91	1.3	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 17:14	TBC

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-22

Sampled: 11/21/2019 10:30

Sample ID: 19K1404-05

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	53.7		% Wt	1		SM 2540G	11/25/19	11/26/19 10:39	adb

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-23

Sampled: 11/21/2019 11:30

Sample ID: 19K1404-06

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Acenaphthylene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Acetophenone	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Aniline	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Anthracene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Benzydine	ND	1.2	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Benzo(a)anthracene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Benzo(a)pyrene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Benzo(b)fluoranthene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Benzo(g,h,i)perylene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Benzo(k)fluoranthene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Benzoic Acid	ND	1.9	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Bis(2-chloroethoxy)methane	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Bis(2-chloroethyl)ether	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Bis(2-chloroisopropyl)ether	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
4-Bromophenylphenylether	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Butylbenzylphthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Carbazole	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
4-Chloroaniline	ND	1.2	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
4-Chloro-3-methylphenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2-Chloronaphthalene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2-Chlorophenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
4-Chlorophenylphenylether	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Chrysene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Dibenz(a,h)anthracene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Dibenzofuran	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Di-n-butylphthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
1,2-Dichlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
1,3-Dichlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
1,4-Dichlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
3,3-Dichlorobenzidine	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2,4-Dichlorophenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Diethylphthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2,4-Dimethylphenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Dimethylphthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
4,6-Dinitro-2-methylphenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2,4-Dinitrophenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2,4-Dinitrotoluene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2,6-Dinitrotoluene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Di-n-octylphthalate	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Fluoranthene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Fluorene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-23

Sampled: 11/21/2019 11:30

Sample ID: 19K1404-06

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Hexachlorobutadiene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Hexachlorocyclopentadiene	ND	0.63	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Hexachloroethane	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Indeno(1,2,3-cd)pyrene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Isophorone	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
1-Methylnaphthalene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2-Methylnaphthalene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2-Methylphenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
3/4-Methylphenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Naphthalene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2-Nitroaniline	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
3-Nitroaniline	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
4-Nitroaniline	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Nitrobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2-Nitrophenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
4-Nitrophenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
N-Nitrosodimethylamine	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
N-Nitrosodi-n-propylamine	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Pentachloronitrobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Pentachlorophenol	ND	0.63	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Phenanthrene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Phenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Pyrene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Pyridine	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
1,2,4-Trichlorobenzene	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2,4,5-Trichlorophenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
2,4,6-Trichlorophenol	ND	0.63	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:11	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	67.3	30-130						11/28/19 0:11	
Phenol-d6	68.6	30-130						11/28/19 0:11	
Nitrobenzene-d5	69.7	30-130						11/28/19 0:11	
2-Fluorobiphenyl	69.9	30-130						11/28/19 0:11	
2,4,6-Tribromophenol	73.9	30-130						11/28/19 0:11	
p-Terphenyl-d14	94.6	30-130						11/28/19 0:11	



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-23

Sampled: 11/21/2019 11:30

Sample ID: 19K1404-06

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Arsenic	4.9	3.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Barium	70	3.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Beryllium	0.81	0.30	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Cadmium	0.45	0.30	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Chromium	13	0.61	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Lead	44	0.91	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Mercury	0.11	0.047	mg/Kg dry	1		SW-846 7471B	11/26/19	11/27/19 9:59	CJV
Nickel	10	0.61	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Selenium	ND	6.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Silver	ND	0.61	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Thallium	ND	3.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Vanadium	41	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:08	MJH
Zinc	90	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 17:19	TBC

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-23

Sampled: 11/21/2019 11:30

Sample ID: 19K1404-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	53.5		% Wt	1		SM 2540G	11/25/19	11/26/19 10:39	adb



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-24

Sampled: 11/21/2019 12:30

Sample ID: 19K1404-07

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Acenaphthylene	ND	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Acetophenone	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Aniline	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Anthracene	ND	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Benzidine	ND	0.91	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Benzo(a)anthracene	0.51	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Benzo(a)pyrene	0.53	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Benzo(b)fluoranthene	0.75	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Benzo(g,h,i)perylene	0.32	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Benzo(k)fluoranthene	0.29	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Benzoic Acid	ND	1.4	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Bis(2-chloroethoxy)methane	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Bis(2-chloroethyl)ether	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Bis(2-chloroisopropyl)ether	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Bis(2-Ethylhexyl)phthalate	3.5	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
4-Bromophenylphenylether	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
3-Butylbenzylphthalate	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Carbazole	ND	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
4-Chloroaniline	ND	0.91	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
4-Chloro-3-methylphenol	ND	0.91	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2-Chloronaphthalene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2-Chlorophenol	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
4-Chlorophenylphenylether	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Chrysene	0.63	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Dibenz(a,h)anthracene	ND	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Dibenzofuran	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Di-n-butylphthalate	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
1,2-Dichlorobenzene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
1,3-Dichlorobenzene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
1,4-Dichlorobenzene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
3,3-Dichlorobenzidine	ND	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2,4-Dichlorophenol	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Diethylphthalate	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2,4-Dimethylphenol	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Dimethylphthalate	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
4,6-Dinitro-2-methylphenol	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2,4-Dinitrophenol	ND	0.91	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2,4-Dinitrotoluene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2,6-Dinitrotoluene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Di-n-octylphthalate	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Fluoranthene	0.97	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Fluorene	ND	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-24

Sampled: 11/21/2019 12:30

Sample ID: 19K1404-07

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Hexachlorobutadiene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Hexachlorocyclopentadiene	ND	0.47	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Hexachloroethane	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Indeno(1,2,3-cd)pyrene	0.38	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Isophorone	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
1-Methylnaphthalene	ND	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2-Methylnaphthalene	ND	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2-Methylphenol	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
3/4-Methylphenol	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Naphthalene	ND	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2-Nitroaniline	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
3-Nitroaniline	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
4-Nitroaniline	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Nitrobenzene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2-Nitrophenol	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
4-Nitrophenol	ND	0.91	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
N-Nitrosodimethylamine	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
N-Nitrosodi-n-propylamine	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Pentachloronitrobenzene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Pentachlorophenol	ND	0.47	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Phenanthrene	0.55	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Phenol	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Pyrene	1.2	0.23	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Pyridine	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
1,2,4-Trichlorobenzene	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2,4,5-Trichlorophenol	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
2,4,6-Trichlorophenol	ND	0.47	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:34	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	63.5	30-130						11/28/19 0:34	
Phenol-d6	66.4	30-130						11/28/19 0:34	
Nitrobenzene-d5	63.2	30-130						11/28/19 0:34	
2-Fluorobiphenyl	66.2	30-130						11/28/19 0:34	
2,4,6-Tribromophenol	75.6	30-130						11/28/19 0:34	
p-Terphenyl-d14	85.6	30-130						11/28/19 0:34	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-24

Sampled: 11/21/2019 12:30

Sample ID: 19K1404-07

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.4	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Arsenic	5.6	2.4	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Barium	40	2.4	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Beryllium	0.31	0.24	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Cadmium	0.45	0.24	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Chromium	27	0.48	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Lead	290	0.72	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Mercury	0.095	0.034	mg/Kg dry	1		SW-846 7471B	11/26/19	11/27/19 10:00	CJV
Nickel	14	0.48	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Selenium	ND	4.8	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Silver	ND	0.48	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Thallium	ND	2.4	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Vanadium	31	0.95	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:15	MJH
Zinc	100	0.95	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 17:24	TBC

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-24

Sampled: 11/21/2019 12:30

Sample ID: 19K1404-07

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	70.8		% Wt	1		SM 2540G	11/25/19	11/26/19 10:39	adb

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-25

Sampled: 11/21/2019 13:00

Sample ID: 19K1404-08

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Acenaphthylene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Acetophenone	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Aniline	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Benzidine	ND	1.1	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Benzo(a)anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Benzo(a)pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Benzo(b)fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Benzo(g,h,i)perylene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Benzo(k)fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Benzoic Acid	ND	1.7	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Bis(2-chloroethoxy)methane	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Bis(2-chloroethyl)ether	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Bis(2-chloroisopropyl)ether	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
4-Bromophenylphenylether	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Butylbenzylphthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Carbazole	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
4-Chloroaniline	ND	1.1	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
4-Chloro-3-methylphenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2-Chloronaphthalene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2-Chlorophenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
4-Chlorophenylphenylether	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Chrysene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Dibenz(a,h)anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Dibenzofuran	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Di-n-butylphthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
1,2-Dichlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
1,3-Dichlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
1,4-Dichlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
3,3-Dichlorobenzidine	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2,4-Dichlorophenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Diethylphthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2,4-Dimethylphenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Dimethylphthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
4,6-Dinitro-2-methylphenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2,4-Dinitrophenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2,4-Dinitrotoluene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2,6-Dinitrotoluene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Di-n-octylphthalate	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2,2-Diphenylhydrazine/Azobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Fluorene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-25

Sampled: 11/21/2019 13:00

Sample ID: 19K1404-08

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Hexachlorobutadiene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Hexachlorocyclopentadiene	ND	0.59	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Hexachloroethane	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Indeno(1,2,3-cd)pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Isophorone	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
1-Methylnaphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2-Methylnaphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2-Methylphenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
3/4-Methylphenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Naphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2-Nitroaniline	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
3-Nitroaniline	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
4-Nitroaniline	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Nitrobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2-Nitrophenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
4-Nitrophenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
N-Nitrosodimethylamine	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
N-Nitrosodi-n-propylamine	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Pentachloronitrobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Pentachlorophenol	ND	0.59	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Phenanthrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Phenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
Pyridine	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
1,2,4-Trichlorobenzene	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2,4,5-Trichlorophenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB
2,4,6-Trichlorophenol	ND	0.59	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:56	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	50.8	30-130	11/28/19 0:56
Phenol-d6	52.3	30-130	11/28/19 0:56
Nitrobenzene-d5	52.2	30-130	11/28/19 0:56
2-Fluorobiphenyl	53.5	30-130	11/28/19 0:56
2,4,6-Tribromophenol	56.9	30-130	11/28/19 0:56
p-Terphenyl-d14	67.9	30-130	11/28/19 0:56

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-25

Sampled: 11/21/2019 13:00

Sample ID: 19K1404-08

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Arsenic	7.4	3.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Barium	85	3.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Beryllium	0.67	0.30	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Cadmium	0.32	0.30	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Chromium	14	0.59	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Lead	73	0.89	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Mercury	0.21	0.042	mg/Kg dry	1		SW-846 7471B	11/26/19	11/27/19 10:02	CJV
Nickel	11	0.59	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Selenium	ND	5.9	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Silver	ND	0.59	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Thallium	ND	3.0	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Vanadium	45	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:21	MJH
Zinc	53	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 17:30	TBC



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-25

Sampled: 11/21/2019 13:00

Sample ID: 19K1404-08

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	56.8		% Wt	1		SM 2540G	11/25/19	11/26/19 10:46	adb



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-26

Sampled: 11/21/2019 13:30

Sample ID: 19K1404-09

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Acenaphthylene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Acetophenone	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Aniline	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Anthracene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Benzidine	ND	1.1	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Benzo(a)anthracene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Benzo(a)pyrene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Benzo(b)fluoranthene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Benzo(g,h,i)perylene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Benzo(k)fluoranthene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Benzoic Acid	ND	1.6	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Bis(2-chloroethoxy)methane	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Bis(2-chloroethyl)ether	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Bis(2-chloroisopropyl)ether	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
4-Bromophenylphenylether	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Butylbenzylphthalate	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Carbazole	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
4-Chloroaniline	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
4-Chloro-3-methylphenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2-Chloronaphthalene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2-Chlorophenol	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
4-Chlorophenylphenylether	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Chrysene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Dibenz(a,h)anthracene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Dibenzofuran	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Di-n-butylphthalate	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
1,2-Dichlorobenzene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
1,3-Dichlorobenzene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
1,4-Dichlorobenzene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
3,3-Dichlorobenzidine	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2,4-Dichlorophenol	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Diethylphthalate	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2,4-Dimethylphenol	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Dimethylphthalate	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
4,6-Dinitro-2-methylphenol	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2,4-Dinitrophenol	ND	1.1	mg/Kg dry	1	V-20, V-04	SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2,4-Dinitrotoluene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2,6-Dinitrotoluene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Di-n-octylphthalate	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2-Diphenylhydrazine/Azobenzene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Fluoranthene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Fluorene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-26

Sampled: 11/21/2019 13:30

Sample ID: 19K1404-09

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Hexachlorobutadiene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Hexachlorocyclopentadiene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Hexachloroethane	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Indeno(1,2,3-cd)pyrene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Isophorone	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
1-Methylnaphthalene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2-Methylnaphthalene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2-Methylphenol	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
3/4-Methylphenol	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Naphthalene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2-Nitroaniline	ND	0.55	mg/Kg dry	1	V-35	SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
3-Nitroaniline	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
4-Nitroaniline	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Nitrobenzene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2-Nitrophenol	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
4-Nitrophenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
N-Nitrosodimethylamine	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
N-Nitrosodiphenylamine/Diphenylamine	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
N-Nitrosodi-n-propylamine	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Pentachloronitrobenzene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Pentachlorophenol	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Phenanthrene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Phenol	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Pyrene	ND	0.27	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
Pyridine	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
1,2,4,5-Tetrachlorobenzene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
1,2,4-Trichlorobenzene	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2,4,5-Trichlorophenol	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL
2,4,6-Trichlorophenol	ND	0.55	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 23:58	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	67.7	30-130	11/27/19 23:58
Phenol-d6	69.9	30-130	11/27/19 23:58
Nitrobenzene-d5	68.8	30-130	11/27/19 23:58
2-Fluorobiphenyl	72.0	30-130	11/27/19 23:58
2,4,6-Tribromophenol	76.6	30-130	11/27/19 23:58
p-Terphenyl-d14	76.1	30-130	11/27/19 23:58

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-26

Sampled: 11/21/2019 13:30

Sample ID: 19K1404-09

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Arsenic	4.7	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Barium	62	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Beryllium	0.76	0.27	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Cadmium	0.39	0.27	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Chromium	12	0.54	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Lead	42	0.81	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Mercury	0.11	0.041	mg/Kg dry	1		SW-846 7471B	11/26/19	11/27/19 10:04	CJV
Nickel	8.9	0.54	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Selenium	ND	5.4	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Silver	ND	0.54	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Vanadium	37	1.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:27	MJH
Zinc	79	1.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 17:35	TBC

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-26

Sampled: 11/21/2019 13:30

Sample ID: 19K1404-09

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	60.7		% Wt	1		SM 2540G	11/25/19	11/26/19 10:47	adb

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-27

Sampled: 11/21/2019 14:30

Sample ID: 19K1404-10

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Acenaphthylene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Acetophenone	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Aniline	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Anthracene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Benzidine	ND	1.1	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Benzo(a)anthracene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Benzo(a)pyrene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Benzo(b)fluoranthene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Benzo(g,h,i)perylene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Benzo(k)fluoranthene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Benzoic Acid	ND	1.6	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Bis(2-chloroethoxy)methane	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Bis(2-chloroethyl)ether	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Bis(2-chloroisopropyl)ether	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
4-Bromophenylphenylether	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Butylbenzylphthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Carbazole	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
4-Chloroaniline	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
4-Chloro-3-methylphenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2-Chloronaphthalene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2-Chlorophenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
4-Chlorophenylphenylether	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Chrysene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Dibenz(a,h)anthracene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Dibenzofuran	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Di-n-butylphthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
1,2-Dichlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
1,3-Dichlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
1,4-Dichlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
3,3-Dichlorobenzidine	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2,4-Dichlorophenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Diethylphthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2,4-Dimethylphenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Dimethylphthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
4,6-Dinitro-2-methylphenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2,4-Dinitrophenol	ND	1.1	mg/Kg dry	1	V-04, V-20	SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2,4-Dinitrotoluene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2,6-Dinitrotoluene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Di-n-octylphthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2-Diphenylhydrazine/Azobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Fluoranthene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Fluorene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-27

Sampled: 11/21/2019 14:30

Sample ID: 19K1404-10

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Hexachlorobutadiene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Hexachlorocyclopentadiene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Hexachloroethane	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Indeno(1,2,3-cd)pyrene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Isophorone	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
1-Methylnaphthalene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2-Methylnaphthalene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2-Methylphenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
3/4-Methylphenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Naphthalene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2-Nitroaniline	ND	0.56	mg/Kg dry	1	V-35	SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
3-Nitroaniline	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
4-Nitroaniline	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Nitrobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2-Nitrophenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
4-Nitrophenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
N-Nitrosodimethylamine	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
N-Nitrosodiphenylamine/Diphenylamine	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
N-Nitrosodi-n-propylamine	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Pentachloronitrobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Pentachlorophenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Phenanthrene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Phenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Pyrene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
Pyridine	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
1,2,4,5-Tetrachlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
1,2,4-Trichlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2,4,5-Trichlorophenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL
2,4,6-Trichlorophenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/28/19 0:22	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	54.4	30-130	11/28/19 0:22
Phenol-d6	57.9	30-130	11/28/19 0:22
Nitrobenzene-d5	56.2	30-130	11/28/19 0:22
2-Fluorobiphenyl	59.8	30-130	11/28/19 0:22
2,4,6-Tribromophenol	64.1	30-130	11/28/19 0:22
p-Terphenyl-d14	64.4	30-130	11/28/19 0:22

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-27

Sampled: 11/21/2019 14:30

Sample ID: 19K1404-10

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Arsenic	4.9	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Barium	66	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Beryllium	0.83	0.27	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Cadmium	0.40	0.27	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Chromium	12	0.55	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Lead	42	0.82	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Mercury	0.12	0.039	mg/Kg dry	1		SW-846 7471B	11/26/19	11/27/19 10:05	CJV
Nickel	9.3	0.55	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Selenium	ND	5.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Silver	ND	0.55	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Vanadium	38	1.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 4:34	MJH
Zinc	84	1.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 17:40	TBC

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1404

Date Received: 11/22/2019

Field Sample #: HB-27

Sampled: 11/21/2019 14:30

Sample ID: 19K1404-10

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	59.9		% Wt	1		SM 2540G	11/25/19	11/26/19 10:47	adb



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### Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
19K1404-01 [HB-16]	B246947	11/25/19
19K1404-02 [HB-17]	B246947	11/25/19
19K1404-03 [HB-19]	B246947	11/25/19
19K1404-04 [HB-20]	B246947	11/25/19
19K1404-05 [HB-22]	B246947	11/25/19
19K1404-06 [HB-23]	B246947	11/25/19
19K1404-07 [HB-24]	B246947	11/25/19
19K1404-08 [HB-25]	B246947	11/25/19
19K1404-09 [HB-26]	B246947	11/25/19
19K1404-10 [HB-27]	B246947	11/25/19

Prep Method: SW-846 3050B-SW-846 6010D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1404-01 [HB-16]	B247118	1.49	50.0	11/26/19
19K1404-02 [HB-17]	B247118	1.52	50.0	11/26/19
19K1404-03 [HB-19]	B247118	1.51	50.0	11/26/19
19K1404-04 [HB-20]	B247118	1.55	50.0	11/26/19
19K1404-05 [HB-22]	B247118	1.47	50.0	11/26/19
19K1404-06 [HB-23]	B247118	1.54	50.0	11/26/19
19K1404-07 [HB-24]	B247118	1.48	50.0	11/26/19
19K1404-08 [HB-25]	B247118	1.48	50.0	11/26/19
19K1404-09 [HB-26]	B247118	1.52	50.0	11/26/19
19K1404-10 [HB-27]	B247118	1.53	50.0	11/26/19

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1404-01 [HB-16]	B247114	0.617	50.0	11/26/19
19K1404-02 [HB-17]	B247114	0.582	50.0	11/26/19
19K1404-03 [HB-19]	B247114	0.588	50.0	11/26/19
19K1404-04 [HB-20]	B247114	0.586	50.0	11/26/19
19K1404-05 [HB-22]	B247114	0.623	50.0	11/26/19
19K1404-06 [HB-23]	B247114	0.598	50.0	11/26/19
19K1404-07 [HB-24]	B247114	0.619	50.0	11/26/19
19K1404-08 [HB-25]	B247114	0.629	50.0	11/26/19
19K1404-09 [HB-26]	B247114	0.606	50.0	11/26/19
19K1404-10 [HB-27]	B247114	0.639	50.0	11/26/19

Prep Method: SW-846 3546-SW-846 8270D-E

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1404-01 [HB-16]	B246869	30.1	1.00	11/24/19
19K1404-02 [HB-17]	B246869	30.5	1.00	11/24/19
19K1404-03 [HB-19]	B246869	30.3	1.00	11/24/19
19K1404-04 [HB-20]	B246869	30.4	1.00	11/24/19
19K1404-05 [HB-22]	B246869	30.1	1.00	11/24/19
19K1404-06 [HB-23]	B246869	30.1	1.00	11/24/19
19K1404-07 [HB-24]	B246869	30.7	1.00	11/24/19
19K1404-08 [HB-25]	B246869	30.4	1.00	11/24/19
19K1404-09 [HB-26]	B246869	30.7	1.00	11/24/19

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**Sample Extraction Data**

Prep Method: SW-846 3546-SW-846 8270D-E

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1404-10 [HB-27]	B246869	30.6	1.00	11/24/19

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246869 - SW-846 3546										
Blank (B246869-BLK1)				Prepared: 11/24/19 Analyzed: 11/27/19						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzidine	ND	0.66	mg/Kg wet							V-04, V-05, V-35
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Benzoic Acid	ND	1.0	mg/Kg wet							L-04
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
Carbazole	ND	0.17	mg/Kg wet							
Chloroaniline	ND	0.66	mg/Kg wet							V-34
Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
4-Chlorophenylphenylether	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachlorocyclopentadiene	ND	0.34	mg/Kg wet							V-05
Hexachloroethane	ND	0.34	mg/Kg wet							
Benzo(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
1-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B246869 - SW-846 3546</b>										
<b>Blank (B246869-BLK1)</b>				Prepared: 11/24/19 Analyzed: 11/27/19						
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
2-Nitroaniline	ND	0.34	mg/Kg wet							
3-Nitroaniline	ND	0.34	mg/Kg wet							
4-Nitroaniline	ND	0.34	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
N-Nitrosodimethylamine	ND	0.34	mg/Kg wet							
N-Nitrosodiphenylamine/Diphenylamine	ND	0.34	mg/Kg wet							
N-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet							
Pentachloronitrobenzene	ND	0.34	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							V-05
Phenanthrene	ND	0.17	mg/Kg wet							
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
1,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet							
2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	5.51		mg/Kg wet	6.67		82.7	30-130			
Surrogate: Phenol-d6	5.60		mg/Kg wet	6.67		84.1	30-130			
Surrogate: Nitrobenzene-d5	2.58		mg/Kg wet	3.33		77.5	30-130			
Surrogate: 2-Fluorobiphenyl	2.76		mg/Kg wet	3.33		82.9	30-130			
Surrogate: 2,4,6-Tribromophenol	5.84		mg/Kg wet	6.67		87.5	30-130			
Surrogate: p-Terphenyl-d14	3.14		mg/Kg wet	3.33		94.3	30-130			
<b>LCS (B246869-BS1)</b>										
				Prepared: 11/24/19 Analyzed: 11/27/19						
Acenaphthene	1.09	0.17	mg/Kg wet	1.67		65.7	40-140			
Acenaphthylene	1.17	0.17	mg/Kg wet	1.67		70.0	40-140			
Acetophenone	1.11	0.34	mg/Kg wet	1.67		66.6	40-140			
Aniline	0.809	0.34	mg/Kg wet	1.67		48.5	10-140			†
Anthracene	1.25	0.17	mg/Kg wet	1.67		75.0	40-140			
Benzidine	1.85	0.66	mg/Kg wet	1.67		111	40-140			V-04, V-05, V-35
Benzo(a)anthracene	1.20	0.17	mg/Kg wet	1.67		72.2	40-140			
Benzo(a)pyrene	1.17	0.17	mg/Kg wet	1.67		70.2	40-140			
Benzo(b)fluoranthene	1.18	0.17	mg/Kg wet	1.67		71.0	40-140			
Benzo(g,h,i)perylene	1.15	0.17	mg/Kg wet	1.67		68.8	40-140			
Benzo(k)fluoranthene	1.21	0.17	mg/Kg wet	1.67		72.3	40-140			
Benzoic Acid	0.179	1.0	mg/Kg wet	1.67		10.7 *	30-130			L-04
Bis(2-chloroethoxy)methane	1.11	0.34	mg/Kg wet	1.67		66.6	40-140			
Bis(2-chloroethyl)ether	1.04	0.34	mg/Kg wet	1.67		62.4	40-140			
Bis(2-chloroisopropyl)ether	1.13	0.34	mg/Kg wet	1.67		67.6	40-140			
Bis(2-Ethylhexyl)phthalate	1.24	0.34	mg/Kg wet	1.67		74.2	40-140			
4-Bromophenylphenylether	1.17	0.34	mg/Kg wet	1.67		70.3	40-140			
Butylbenzylphthalate	1.23	0.34	mg/Kg wet	1.67		73.6	40-140			
Carbazole	1.20	0.17	mg/Kg wet	1.67		72.3	40-140			
Chloroaniline	0.893	0.66	mg/Kg wet	1.67		53.6	10-140			V-34 †
4-Chloro-3-methylphenol	1.23	0.66	mg/Kg wet	1.67		73.7	30-130			
2-Chloronaphthalene	0.986	0.34	mg/Kg wet	1.67		59.2	40-140			

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246869 - SW-846 3546										
LCS (B246869-BS1)					Prepared: 11/24/19 Analyzed: 11/27/19					
2-Chlorophenol	1.11	0.34	mg/Kg wet	1.67		66.4	30-130			
4-Chlorophenylphenylether	1.16	0.34	mg/Kg wet	1.67		69.4	40-140			
Chrysene	1.19	0.17	mg/Kg wet	1.67		71.2	40-140			
Dibenz(a,h)anthracene	1.14	0.17	mg/Kg wet	1.67		68.5	40-140			
Dibenzofuran	1.20	0.34	mg/Kg wet	1.67		71.8	40-140			
Di-n-butylphthalate	1.24	0.34	mg/Kg wet	1.67		74.2	40-140			
1,2-Dichlorobenzene	1.02	0.34	mg/Kg wet	1.67		61.1	40-140			
1,3-Dichlorobenzene	0.991	0.34	mg/Kg wet	1.67		59.5	40-140			
1,4-Dichlorobenzene	0.995	0.34	mg/Kg wet	1.67		59.7	40-140			
3,3-Dichlorobenzidine	0.946	0.17	mg/Kg wet	1.67		56.8	20-140			†
2,4-Dichlorophenol	1.13	0.34	mg/Kg wet	1.67		67.6	30-130			
Diethylphthalate	1.16	0.34	mg/Kg wet	1.67		69.8	40-140			
2,4-Dimethylphenol	1.01	0.34	mg/Kg wet	1.67		60.8	30-130			
Dimethylphthalate	1.16	0.34	mg/Kg wet	1.67		69.7	40-140			
4,6-Dinitro-2-methylphenol	1.09	0.34	mg/Kg wet	1.67		65.5	30-130			
2,4-Dinitrophenol	0.601	0.66	mg/Kg wet	1.67		36.1	30-130			
2,4-Dinitrotoluene	1.30	0.34	mg/Kg wet	1.67		78.1	40-140			
2,6-Dinitrotoluene	1.32	0.34	mg/Kg wet	1.67		79.4	40-140			
Di-n-octylphthalate	1.29	0.34	mg/Kg wet	1.67		77.4	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.24	0.34	mg/Kg wet	1.67		74.1	40-140			
oranthene	1.25	0.17	mg/Kg wet	1.67		75.0	40-140			
luorene	1.20	0.17	mg/Kg wet	1.67		71.8	40-140			
Hexachlorobenzene	1.25	0.34	mg/Kg wet	1.67		75.1	40-140			
Hexachlorobutadiene	0.990	0.34	mg/Kg wet	1.67		59.4	40-140			
Hexachlorocyclopentadiene	0.692	0.34	mg/Kg wet	1.67		41.5	40-140			V-05
Hexachloroethane	1.01	0.34	mg/Kg wet	1.67		60.7	40-140			
Indeno(1,2,3-cd)pyrene	1.24	0.17	mg/Kg wet	1.67		74.6	40-140			
Isophorone	1.16	0.34	mg/Kg wet	1.67		69.8	40-140			
1-Methylnaphthalene	1.01	0.17	mg/Kg wet	1.67		60.5	40-140			
2-Methylnaphthalene	1.21	0.17	mg/Kg wet	1.67		72.5	40-140			
2-Methylphenol	1.08	0.34	mg/Kg wet	1.67		64.9	30-130			
3/4-Methylphenol	1.15	0.34	mg/Kg wet	1.67		69.1	30-130			
Naphthalene	1.09	0.17	mg/Kg wet	1.67		65.3	40-140			
2-Nitroaniline	1.30	0.34	mg/Kg wet	1.67		77.8	40-140			
3-Nitroaniline	1.21	0.34	mg/Kg wet	1.67		72.7	30-140			†
4-Nitroaniline	1.33	0.34	mg/Kg wet	1.67		79.6	40-140			
Nitrobenzene	1.13	0.34	mg/Kg wet	1.67		67.6	40-140			
2-Nitrophenol	1.26	0.34	mg/Kg wet	1.67		75.9	30-130			
4-Nitrophenol	1.39	0.66	mg/Kg wet	1.67		83.4	30-130			
N-Nitrosodimethylamine	0.944	0.34	mg/Kg wet	1.67		56.7	40-140			
N-Nitrosodiphenylamine/Diphenylamine	1.27	0.34	mg/Kg wet	1.67		76.2	40-140			
N-Nitrosodi-n-propylamine	1.11	0.34	mg/Kg wet	1.67		66.8	40-140			
Pentachloronitrobenzene	1.29	0.34	mg/Kg wet	1.67		77.2	40-140			
Pentachlorophenol	0.791	0.34	mg/Kg wet	1.67		47.4	30-130			V-05
Phenanthrene	1.24	0.17	mg/Kg wet	1.67		74.4	40-140			
Phenol	1.22	0.34	mg/Kg wet	1.67		73.1	30-130			
Pyrene	1.21	0.17	mg/Kg wet	1.67		72.7	40-140			
Pyridine	0.632	0.34	mg/Kg wet	1.67		37.9	30-140			†
2,4,5-Tetrachlorobenzene	1.04	0.34	mg/Kg wet	1.67		62.5	40-140			
2,4-Trichlorobenzene	1.03	0.34	mg/Kg wet	1.67		61.9	40-140			
2,4,5-Trichlorophenol	1.26	0.34	mg/Kg wet	1.67		75.6	30-130			
2,4,6-Trichlorophenol	1.17	0.34	mg/Kg wet	1.67		70.3	30-130			

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B246869 - SW-846 3546</b>										
<b>LCS (B246869-BS1)</b>										
					Prepared: 11/24/19 Analyzed: 11/27/19					
Surrogate: 2-Fluorophenol	4.87		mg/Kg wet	6.67		73.1	30-130			
Surrogate: Phenol-d6	5.00		mg/Kg wet	6.67		75.1	30-130			
Surrogate: Nitrobenzene-d5	2.33		mg/Kg wet	3.33		69.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.47		mg/Kg wet	3.33		74.0	30-130			
Surrogate: 2,4,6-Tribromophenol	6.16		mg/Kg wet	6.67		92.4	30-130			
Surrogate: p-Terphenyl-d14	2.80		mg/Kg wet	3.33		83.9	30-130			
<b>LCS Dup (B246869-BSD1)</b>										
					Prepared: 11/24/19 Analyzed: 11/27/19					
Acenaphthene	1.14	0.17	mg/Kg wet	1.67		68.5	40-140	4.26	30	
Acenaphthylene	1.19	0.17	mg/Kg wet	1.67		71.6	40-140	2.26	30	
Acetophenone	1.22	0.34	mg/Kg wet	1.67		73.4	40-140	9.71	30	
Aniline	0.956	0.34	mg/Kg wet	1.67		57.4	10-140	16.7	50	† ‡
Anthracene	1.29	0.17	mg/Kg wet	1.67		77.3	40-140	2.97	30	
Benzidine	1.92	0.66	mg/Kg wet	1.67		115	40-140	4.03	30	V-04, V-05, V-35
Benzo(a)anthracene	1.24	0.17	mg/Kg wet	1.67		74.3	40-140	2.87	30	
Benzo(a)pyrene	1.21	0.17	mg/Kg wet	1.67		72.6	40-140	3.33	30	
Benzo(b)fluoranthene	1.29	0.17	mg/Kg wet	1.67		77.4	40-140	8.54	30	
Benzo(g,h,i)perylene	1.33	0.17	mg/Kg wet	1.67		79.8	40-140	14.7	30	
Benzo(k)fluoranthene	1.30	0.17	mg/Kg wet	1.67		78.1	40-140	7.69	30	
Benzoic Acid	0.168	1.0	mg/Kg wet	1.67		10.1	30-130	6.35	50	L-04 ‡
1,2-bis(2-chloroethoxy)methane	1.20	0.34	mg/Kg wet	1.67		72.3	40-140	8.27	30	
Bis(2-chloroethyl)ether	1.16	0.34	mg/Kg wet	1.67		69.7	40-140	11.2	30	
Bis(2-chloroisopropyl)ether	1.26	0.34	mg/Kg wet	1.67		75.4	40-140	10.9	30	
Bis(2-Ethylhexyl)phthalate	1.25	0.34	mg/Kg wet	1.67		75.2	40-140	1.34	30	
4-Bromophenylphenylether	1.26	0.34	mg/Kg wet	1.67		75.7	40-140	7.37	30	
Butylbenzylphthalate	1.26	0.34	mg/Kg wet	1.67		75.8	40-140	2.86	30	
Carbazole	1.22	0.17	mg/Kg wet	1.67		73.4	40-140	1.59	30	
4-Chloroaniline	0.976	0.66	mg/Kg wet	1.67		58.5	10-140	8.81	30	V-34 †
4-Chloro-3-methylphenol	1.17	0.66	mg/Kg wet	1.67		70.1	30-130	5.01	30	
2-Chloronaphthalene	1.07	0.34	mg/Kg wet	1.67		64.0	40-140	7.79	30	
2-Chlorophenol	1.23	0.34	mg/Kg wet	1.67		73.6	30-130	10.3	30	
4-Chlorophenylphenylether	1.16	0.34	mg/Kg wet	1.67		69.5	40-140	0.0576	30	
Chrysene	1.21	0.17	mg/Kg wet	1.67		72.7	40-140	2.08	30	
Dibenz(a,h)anthracene	1.24	0.17	mg/Kg wet	1.67		74.6	40-140	8.55	30	
Dibenzofuran	1.21	0.34	mg/Kg wet	1.67		72.3	40-140	0.777	30	
Di-n-butylphthalate	1.26	0.34	mg/Kg wet	1.67		75.8	40-140	2.13	30	
1,2-Dichlorobenzene	1.14	0.34	mg/Kg wet	1.67		68.3	40-140	11.1	30	
1,3-Dichlorobenzene	1.10	0.34	mg/Kg wet	1.67		66.0	40-140	10.4	30	
1,4-Dichlorobenzene	1.11	0.34	mg/Kg wet	1.67		66.5	40-140	10.8	30	
3,3-Dichlorobenzidine	1.07	0.17	mg/Kg wet	1.67		64.1	20-140	12.1	50	† ‡
2,4-Dichlorophenol	1.17	0.34	mg/Kg wet	1.67		70.3	30-130	3.92	30	
Diethylphthalate	1.15	0.34	mg/Kg wet	1.67		68.8	40-140	1.36	30	
2,4-Dimethylphenol	1.07	0.34	mg/Kg wet	1.67		63.9	30-130	4.94	30	
Dimethylphthalate	1.19	0.34	mg/Kg wet	1.67		71.4	40-140	2.47	30	
4,6-Dinitro-2-methylphenol	1.09	0.34	mg/Kg wet	1.67		65.5	30-130	0.0916	30	
2,4-Dinitrophenol	0.557	0.66	mg/Kg wet	1.67		33.4	30-130	7.71	30	
2,4-Dinitrotoluene	1.25	0.34	mg/Kg wet	1.67		74.8	40-140	4.34	30	
2,6-Dinitrotoluene	1.33	0.34	mg/Kg wet	1.67		79.9	40-140	0.653	30	
1-n-octylphthalate	1.54	0.34	mg/Kg wet	1.67		92.4	40-140	17.6	30	
1,2-Diphenylhydrazine/Azobenzene	1.35	0.34	mg/Kg wet	1.67		80.8	40-140	8.63	30	
Fluoranthene	1.27	0.17	mg/Kg wet	1.67		76.4	40-140	1.85	30	
Fluorene	1.17	0.17	mg/Kg wet	1.67		70.4	40-140	1.91	30	

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246869 - SW-846 3546										
LCS Dup (B246869-BSD1)					Prepared: 11/24/19 Analyzed: 11/27/19					
Hexachlorobenzene	1.31	0.34	mg/Kg wet	1.67		78.9	40-140	4.86	30	
Hexachlorobutadiene	1.13	0.34	mg/Kg wet	1.67		67.6	40-140	12.9	30	
Hexachlorocyclopentadiene	0.678	0.34	mg/Kg wet	1.67		40.7	40-140	1.99	30	V-05
Hexachloroethane	1.11	0.34	mg/Kg wet	1.67		66.4	40-140	8.96	30	
Indeno(1,2,3-cd)pyrene	1.37	0.17	mg/Kg wet	1.67		82.0	40-140	9.48	30	
Isophorone	1.24	0.34	mg/Kg wet	1.67		74.7	40-140	6.67	30	
1-Methylnaphthalene	1.05	0.17	mg/Kg wet	1.67		63.0	40-140	4.05	30	
2-Methylnaphthalene	1.27	0.17	mg/Kg wet	1.67		76.0	40-140	4.69	30	
2-Methylphenol	1.17	0.34	mg/Kg wet	1.67		70.1	30-130	7.79	30	
3/4-Methylphenol	1.21	0.34	mg/Kg wet	1.67		72.4	30-130	4.66	30	
Naphthalene	1.19	0.17	mg/Kg wet	1.67		71.4	40-140	8.92	30	
2-Nitroaniline	1.28	0.34	mg/Kg wet	1.67		76.7	40-140	1.50	30	
3-Nitroaniline	1.20	0.34	mg/Kg wet	1.67		72.3	30-140	0.607	30	†
4-Nitroaniline	1.23	0.34	mg/Kg wet	1.67		74.1	40-140	7.19	30	
Nitrobenzene	1.24	0.34	mg/Kg wet	1.67		74.1	40-140	9.29	30	
2-Nitrophenol	1.39	0.34	mg/Kg wet	1.67		83.7	30-130	9.75	30	
4-Nitrophenol	1.26	0.66	mg/Kg wet	1.67		75.8	30-130	9.53	50	†
N-Nitrosodimethylamine	1.04	0.34	mg/Kg wet	1.67		62.4	40-140	9.71	30	
N-Nitrosodiphenylamine/Diphenylamine	1.36	0.34	mg/Kg wet	1.67		81.4	40-140	6.58	30	
N-Nitrosodi-n-propylamine	1.21	0.34	mg/Kg wet	1.67		72.5	40-140	8.15	30	
1,2,3-Trichloronitrobenzene	1.30	0.34	mg/Kg wet	1.67		78.1	40-140	1.16	30	
1,2,4-Trichlorophenol	0.770	0.34	mg/Kg wet	1.67		46.2	30-130	2.65	30	V-05
Phenanthrene	1.27	0.17	mg/Kg wet	1.67		76.2	40-140	2.39	30	
Phenol	1.32	0.34	mg/Kg wet	1.67		79.1	30-130	7.99	30	
Pyrene	1.25	0.17	mg/Kg wet	1.67		75.2	40-140	3.41	30	
Pyridine	0.687	0.34	mg/Kg wet	1.67		41.2	30-140	8.34	30	†
1,2,4,5-Tetrachlorobenzene	1.20	0.34	mg/Kg wet	1.67		72.2	40-140	14.3	30	
1,2,4-Trichlorobenzene	1.16	0.34	mg/Kg wet	1.67		69.6	40-140	11.8	30	
2,4,5-Trichlorophenol	1.29	0.34	mg/Kg wet	1.67		77.3	30-130	2.12	30	
2,4,6-Trichlorophenol	1.24	0.34	mg/Kg wet	1.67		74.2	30-130	5.43	30	
Surrogate: 2-Fluorophenol	5.38		mg/Kg wet	6.67		80.7	30-130			
Surrogate: Phenol-d6	5.28		mg/Kg wet	6.67		79.3	30-130			
Surrogate: Nitrobenzene-d5	5.52		mg/Kg wet	3.33		75.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.68		mg/Kg wet	3.33		80.6	30-130			
Surrogate: 2,4,6-Tribromophenol	5.69		mg/Kg wet	6.67		85.4	30-130			
Surrogate: p-Terphenyl-d14	2.84		mg/Kg wet	3.33		85.1	30-130			

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## QUALITY CONTROL

## Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B247114 - SW-846 7471</b>										
<b>Blank (B247114-BLK1)</b> Prepared: 11/26/19 Analyzed: 11/27/19										
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B247114-BS1)</b> Prepared: 11/26/19 Analyzed: 11/27/19										
Mercury	2.73	0.38	mg/Kg wet	2.93		93.1	71.3-128.7			
<b>LCS Dup (B247114-BSD1)</b> Prepared: 11/26/19 Analyzed: 11/27/19										
Mercury	2.23	0.38	mg/Kg wet	2.93		76.0	71.3-128.7	20.2	*	20 R-05
<b>Batch B247118 - SW-846 3050B</b>										
<b>Blank (B247118-BLK1)</b> Prepared: 11/26/19 Analyzed: 11/27/19										
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
<b>LCS (B247118-BS1)</b> Prepared: 11/26/19 Analyzed: 11/27/19										
Antimony	29.7	5.0	mg/Kg wet	40.0		74.2	6.3-208			
Arsenic	108	5.0	mg/Kg wet	125		86.5	82.4-116.8			
Barium	539	5.0	mg/Kg wet	529		102	81.7-118.5			
Beryllium	147	0.50	mg/Kg wet	155		94.8	82.6-116.8			
Cadmium	37.6	0.50	mg/Kg wet	37.7		99.7	82.2-117.5			
Chromium	51.4	0.99	mg/Kg wet	58.3		88.1	82-118.2			
Lead	94.9	1.5	mg/Kg wet	111		85.5	82.3-117.1			
Nickel	311	0.99	mg/Kg wet	333		93.5	82.6-117.4			
Selenium	226	9.9	mg/Kg wet	251		89.9	78.9-121.5			
Silver	26.5	0.99	mg/Kg wet	27.2		97.6	81-119.2			
Thallium	221	5.0	mg/Kg wet	241		91.5	80.5-119.1			
Vanadium	108	2.0	mg/Kg wet	125		86.7	78.6-120.8			
Zinc	325	2.0	mg/Kg wet	351		92.5	80.3-119.4			
<b>LCS Dup (B247118-BSD1)</b> Prepared: 11/26/19 Analyzed: 11/27/19										
Antimony	29.6	4.9	mg/Kg wet	40.0		73.9	6.3-208	0.448	30	
Arsenic	109	4.9	mg/Kg wet	125		86.8	82.4-116.8	0.361	30	
Barium	583	4.9	mg/Kg wet	529		110	81.7-118.5	7.84	20	
Beryllium	145	0.49	mg/Kg wet	155		93.4	82.6-116.8	1.50	30	
Cadmium	35.9	0.49	mg/Kg wet	37.7		95.2	82.2-117.5	4.66	20	
Chromium	51.9	0.98	mg/Kg wet	58.3		89.0	82-118.2	0.978	30	
Lead	96.4	1.5	mg/Kg wet	111		86.9	82.3-117.1	1.59	30	
Nickel	316	0.98	mg/Kg wet	333		94.9	82.6-117.4	1.52	30	
Selenium	225	9.8	mg/Kg wet	251		89.6	78.9-121.5	0.276	30	
Silver	27.1	0.98	mg/Kg wet	27.2		99.7	81-119.2	2.19	30	
Thallium	220	4.9	mg/Kg wet	241		91.2	80.5-119.1	0.306	30	
Vanadium	109	2.0	mg/Kg wet	125		87.0	78.6-120.8	0.292	30	
Zinc	321	2.0	mg/Kg wet	351		91.5	80.3-119.4	1.12	30	



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## QUALITY CONTROL

## Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Batch B247118 - SW-846 3050B

Duplicate (B247118-DUP1)		Source: 19K1404-01			Prepared: 11/26/19 Analyzed: 11/27/19					
Antimony	ND	3.0	mg/Kg dry		ND		NC	35		
Arsenic	5.95	3.0	mg/Kg dry		8.14		31.0	35		
Barium	63.2	3.0	mg/Kg dry		63.7		0.781	35		
Beryllium	0.483	0.30	mg/Kg dry		0.493		2.13	35		
Cadmium	0.314	0.30	mg/Kg dry		ND		NC	35		
Chromium	14.5	0.60	mg/Kg dry		13.8		4.91	35		
Lead	90.7	0.90	mg/Kg dry		86.6		4.71	35		
Nickel	10.5	0.60	mg/Kg dry		9.84		6.58	35		
Selenium	ND	6.0	mg/Kg dry		ND		NC	35		
Silver	ND	0.60	mg/Kg dry		ND		NC	35		
Thallium	ND	3.0	mg/Kg dry		ND		NC	35		
Vanadium	34.6	1.2	mg/Kg dry		37.0		6.79	35		
Zinc	68.6	1.2	mg/Kg dry		69.7		1.48	35		

## MRL Check (B247118-MRL1)

Prepared: 11/26/19 Analyzed: 11/27/19

Lead	0.520	0.50	mg/Kg wet	0.500	104	80-120				
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## Matrix Spike (B247118-MS1)

Source: 19K1404-01

Prepared: 11/26/19 Analyzed: 11/27/19

Antimony	10.6	2.9	mg/Kg dry	28.9	1.61	31.1	*	75-125		MS-07
Arsenic	30.8	2.9	mg/Kg dry	28.9	8.14	78.3		75-125		
Barium	94.7	2.9	mg/Kg dry	28.9	63.7	108		75-125		
Beryllium	27.3	0.29	mg/Kg dry	28.9	0.493	92.8		75-125		
Cadmium	25.9	0.29	mg/Kg dry	28.9	0.295	88.7		75-125		
Chromium	42.0	0.58	mg/Kg dry	28.9	13.8	97.8		75-125		
Lead	117	0.87	mg/Kg dry	28.9	86.6	107		75-125		
Nickel	36.7	0.58	mg/Kg dry	28.9	9.84	93.1		75-125		
Selenium	25.1	5.8	mg/Kg dry	28.9	ND	86.9		75-125		
Silver	29.2	0.58	mg/Kg dry	28.9	ND	101		75-125		
Thallium	31.3	2.9	mg/Kg dry	28.9	ND	108		75-125		
Vanadium	62.9	1.2	mg/Kg dry	28.9	37.0	89.6		75-125		
Zinc	126	1.2	mg/Kg dry	57.8	69.7	97.4		75-125		

## FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-35	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8270D-E in Soil</b>	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Acetophenone	NY,NH,ME,NC,VA
Aniline	NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzidine	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Benzoic Acid	NY,NH,ME,NC,VA
Bis(2-chloroethoxy)methane	CT,NY,NH,ME,NC,VA
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA
2-Chloronaphthalene	CT,NY,NH,NC,VA
2-Chlorophenol	CT,NY,NH,ME,NC,VA
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Dibenzofuran	CT,NY,NH,ME,NC,VA
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA
1,2-Dichlorobenzene	NY,NH,ME,NC,VA
1,3-Dichlorobenzene	NY,NH,ME,NC,VA



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D-E in Soil</i>	
1,4-Dichlorobenzene	NY,NH,ME,NC,VA
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA
Diethylphthalate	CT,NY,NH,ME,NC,VA
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA
Dimethylphthalate	CT,NY,NH,ME,NC,VA
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	NY,NH,ME,NC,VA
Hexachlorobenzene	CT,NY,NH,ME,NC,VA
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA
Hexachloroethane	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
Isophorone	CT,NY,NH,ME,NC,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
2-Methylphenol	CT,NY,NH,ME,NC,VA
3/4-Methylphenol	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
2-Nitroaniline	CT,NY,NH,ME,NC,VA
3-Nitroaniline	CT,NY,NH,ME,NC,VA
4-Nitroaniline	CT,NY,NH,ME,NC,VA
Nitrobenzene	CT,NY,NH,ME,NC,VA
2-Nitrophenol	CT,NY,NH,ME,NC,VA
4-Nitrophenol	CT,NY,NH,ME,NC,VA
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA
Pentachloronitrobenzene	NY,NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenol	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
Pyridine	CT,NY,NH,ME,NC,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA
2-Fluorophenol	NC

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The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

19K1404



Phone: 413-525-2332  
Fax: 413-525-6405

Email: info@contestlabs.com

Company Name: **CONTEST LABS**  
Address: **6 HURON DRIVE NATICK MA**  
Phone: **508 875 2657**  
Project Name: **UMASS WALTHAM**  
Project Location: **BEAVER ST WALTHAM MA**  
Project Number: **18301P**  
Project Manager: **ALAN SUNOQUIST**  
Con-Test Quote Name/Number:

Doc # 381 Rev 2\_06262019

39 Spruce Street  
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

Requested Turnaround Time

5-Day ☒ 10-Day ☐ Due Date:

PFAS 10-Day (std) ☐ Rush-Approval Required

1-Day ☐ 3-Day ☐ 2-Day ☐ 4-Day ☐

Orthophosphate Samples

Field Filtered Lab to Filter

Field Filtered Lab to Filter

Data Delivery

PDF ☒ EXCEL ☒

Format: **BATH**

Other: ☐

CLP Like Data Pkg Required: ☐

Email To: **ASUNOQUIST@CONTESTLABS.COM**

Fax To #: **MOBRIEN@CONTESTLABS.COM**

### ANALYSIS REQUESTED

1 Preservation Code	2 Preservation Codes
Curier Use Only	1 = Iced H = HCL M = Methanol N = Nitric Acid S = Sulfuric Acid B = Sodium Bisulfate X = Sodium Hydroxide T = Sodium Thiosulfate O = Other (please define)
Total Number Of:	
VIALS	
GLASS	
PLASTIC	
BACTERIA	
ENCORE	
Glassware in the fridge? Y/N	
Glassware in freezer? Y/N	
Prepackaged Cooler? Y/N	
*Contest is not responsible for missing samples from prepacked coolers	
1 Matrix Codes:	
GW = Ground Water WW = Waste Water DW = Drinking Water A = Air S = Soil SL = Sludge SOL = Solid O = Other (please define)	

Client Comments:
MA MCP Required
MCP Certification Form Required
CT RCP Required
RCP Certification Form Required
MA State DW Required
PWSID #
Project Entity
Government
Federal
City
Municipality
ZI J
Brownfield
MAWRA
School
MBTA
WRTA
Chromatogram
AIHA-LAP, LLC
Other
PCB ONLY
Soxhlet
Non Soxhlet

Please use the following codes to indicate possible sample concentration within the Conc Code column above:  
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) **ALAN SUNOQUIST** Date/Time: **11/22/19 10:55**  
Received by: (signature) **ALAN SUNOQUIST** Date/Time: **11/22/19 4:00**  
Relinquished by: (signature) **ALAN SUNOQUIST** Date/Time: **11/22/19 10:00**  
Received by: (signature) **ALAN SUNOQUIST** Date/Time: **11/22/19 10:00**  
Relinquished by: (signature) **ALAN SUNOQUIST** Date/Time: **11/22/19 10:00**  
Received by: (signature) **ALAN SUNOQUIST** Date/Time: **11/22/19 10:00**  
Relinquished by: (signature) **ALAN SUNOQUIST** Date/Time: **11/22/19 10:00**  
Received by: (signature) **ALAN SUNOQUIST** Date/Time: **11/22/19 10:00**

Comments:

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**con-test®**  
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client CDW Consultants

Received By SA Date 11/22 Time 1100

How were the samples received? In Cooler T No Cooler \_\_\_\_\_ On Ice T No Ice \_\_\_\_\_  
Direct from Sampling \_\_\_\_\_ Ambient \_\_\_\_\_ Melted Ice \_\_\_\_\_

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 2.1  
By Blank # \_\_\_\_\_ Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? NA Were Samples Tampered with? NA

Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent information? Client T Analysis T Sampler Name T  
Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? \_\_\_\_\_

Are there Rushes? F Who was notified? \_\_\_\_\_

Are there Short Holds? F Who was notified? \_\_\_\_\_

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? SA-T MS/MSD? F

Were trip blanks received? F Is splitting samples required? F

Do all samples have the proper pH? F On COC? F Acid NA Base NA

Unp-	1 Liter Amb.	1 Liter Plastic	16 oz Amb.	<u>10</u>
HCL-	500 mL Amb.	500 mL Plastic	8oz Amb/Clear	
Meoh-	250 mL Amb.	250 mL Plastic	4oz Amb/Clear	
Bisulfate-	Flashpoint	Col./Bacteria	2oz Amb/Clear	
DI-	Other Glass	Other Plastic	Encore	
Thiosulfate-	SOC Kit	Plastic Bag	Frozen:	
Sulfuric-	Perchlorate	Ziplock		

#### Unused Media

Unp-	1 Liter Amb.	1 Liter Plastic	16 oz Amb.	
HCL-	500 mL Amb.	500 mL Plastic	8oz Amb/Clear	
Meoh-	250 mL Amb.	250 mL Plastic	4oz Amb/Clear	
Bisulfate-	Col./Bacteria	Flashpoint	2oz Amb/Clear	
DI-	Other Plastic	Other Glass	Encore	
Thiosulfate-	SOC Kit	Plastic Bag	Frozen:	
Sulfuric-	Perchlorate	Ziplock		

Comments:







Accreditation#  
98218

12/31/19

## **CDW Consultants, Inc.**

**MicroVision Labs Coal Ash Report, Job Number: 13409**

**CDW Consultants, Inc. Project Number: 1830**

**CDW Consultants, Inc. Project Name: Beaver St**

### **Scope of Work:**

This report covers the methods and findings of the Coal/Coal Ash analysis that MicroVision Laboratories, Inc. conducted on Three (3) soil samples submitted for testing from the Beaver St project, number 1830. The purpose of this analysis was to detect and document any coal, coal ash, wood ash or asphalt that may be present in the submitted soil samples by use of a combination of microscopy techniques including SEM/EDS, PLM, and macroscopic inspection.

### **Methods:**

MicroVision Labs is accredited to the ISO/IEC 17025:2017 standard. This analysis follows our in house SOP #MVL05 (Microscopic Analysis for Coal, Coal Ash and Wood Ash). This method is listed on our certificate of accreditation and has been validated.

### **Findings:**

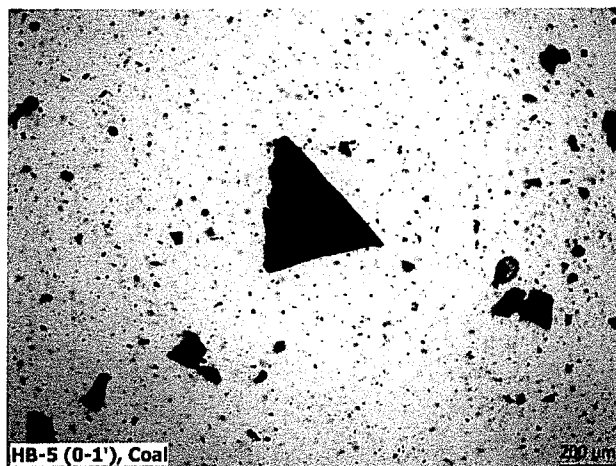
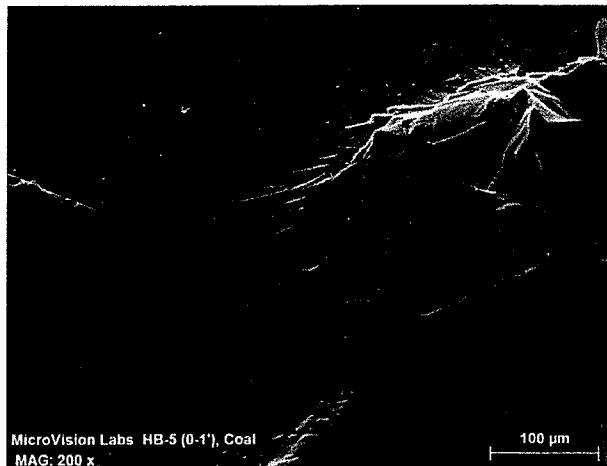
The following pages display the data for each particle type detected in the samples for this project. Each page contains a PLM image, SEM image, and EDS spectrum for the particle types detected for these samples as well as particle type descriptions and observations.

### **ISO/IEC 17025:2017 Accredited**

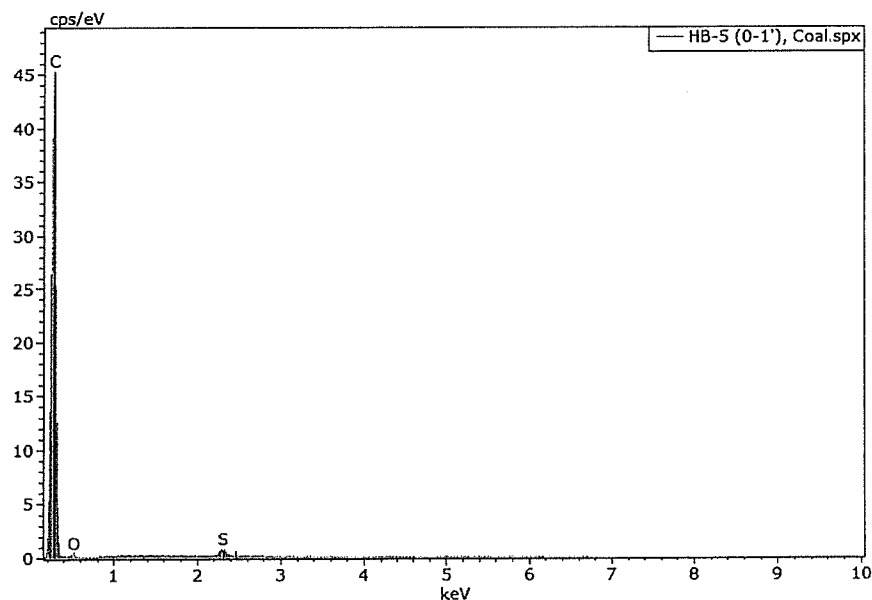
MicroVision Laboratories, Inc. 187 Billerica Road, Chelmsford, MA 01824  
Phone: (978) 250-9909 Fax: (978) 250-9901 Email: [Sales@MicroVisionLabs.com](mailto:Sales@MicroVisionLabs.com)  
[www.MicroVisionLabs.com](http://www.MicroVisionLabs.com)

**Sample: HB-5 (0-1')****Number of Suspect Particle Types: Three (3)**

**Coal:** This particle type consisted of eleven (11) shiny, black grains approximately 1-3mm in diameter. The PLM examination indicated this particle type to be consistent with coal. The PLM and SEM images of this particle type show the angular edges and typical conchoidal fractures found in coal.

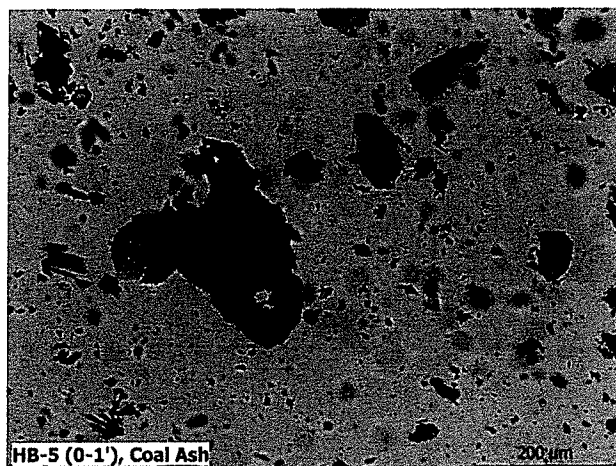
**PLM Image****SEM Image**

The EDS spectrum, shown below, confirms that this particle type is coal. The analysis for this particle shows concentrations of carbon, oxygen and sulfur.

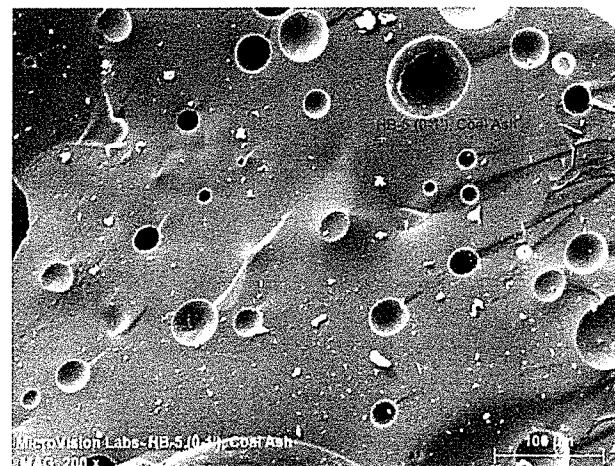
**ISO/IEC 17025:2017 Accredited**

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**Coal Ash:** This particle type consisted of four (4) dark, porous grains approximately 1-3mm in diameter. The PLM examination indicated this particle type to be consistent with coal ash. The PLM and SEM images show the spherical gas voids that formed during combustion.

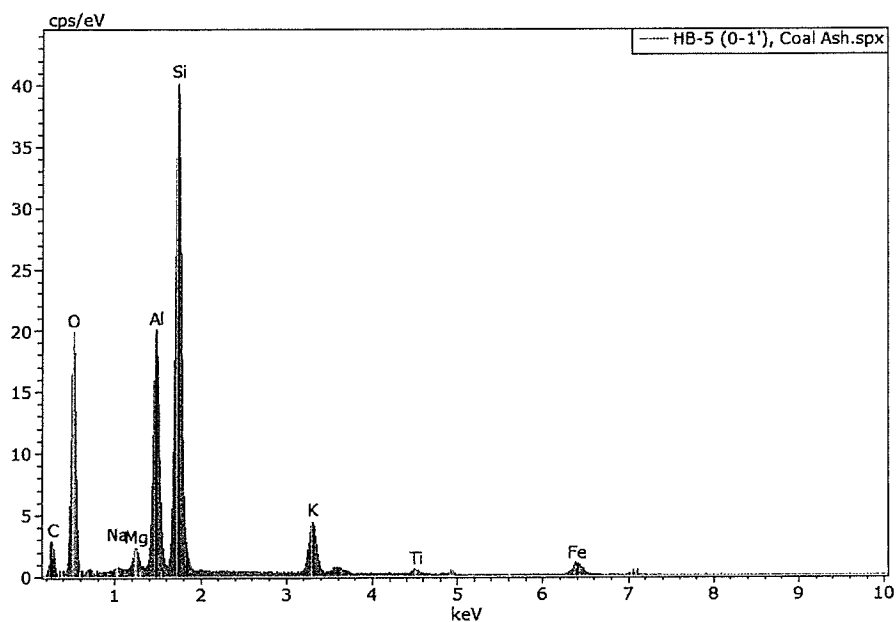


PLM Image



SEM Image

The EDS spectrum, shown below, indicates this particle type is coal ash. The analysis for this particle shows concentrations of carbon, oxygen, sodium, magnesium, aluminum, silicon, potassium, titanium and iron.

**ISO/IEC 17025:2017 Accredited**

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**Wood Ash:** This particle type consisted of two (2) friable, black grains approximately 2mm in length. The PLM examination indicated this particle type to be consistent with wood ash. The PLM and SEM photos show the cellular structure typical of wood still present in these grains.

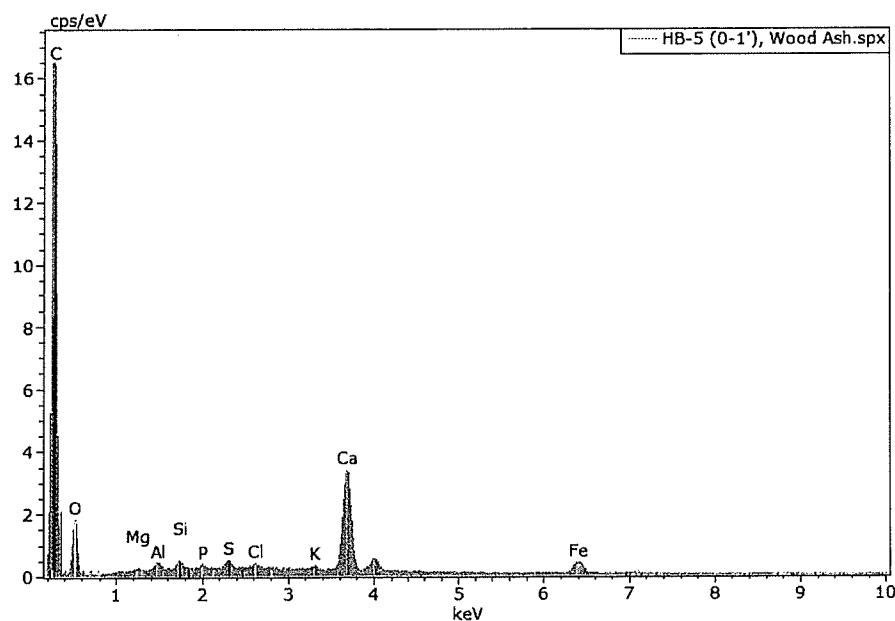


PLM Image



SEM Image

The EDS spectrum, shown below, indicates this particle type is wood ash. The analysis for this particle shows concentrations of carbon, oxygen, magnesium, aluminum, silicon, phosphorus, sulfur, chlorine, potassium, calcium and iron.

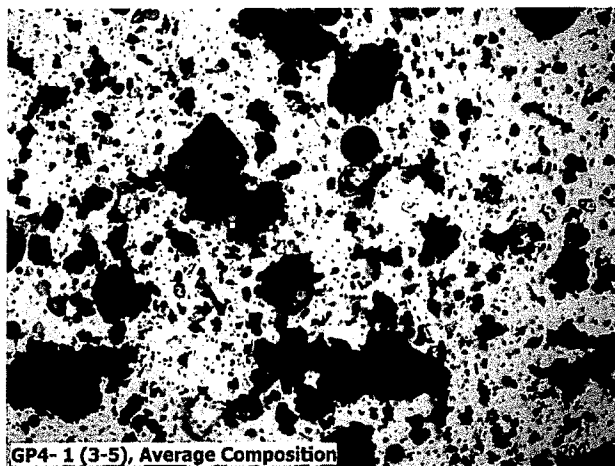
**ISO/IEC 17025:2017 Accredited**

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## Sample: GP4-1 (3-5)

**No coal, coal ash, wood ash, or asphalt particles were detected in this sample.**

**Minerals:** This particle type consisted of over one hundred (100+) shiny, dark grains 1-10mm in diameter. The PLM examination indicated this particle type to be consistent with mineral matter. The PLM and SEM images of this particle type are shown below.

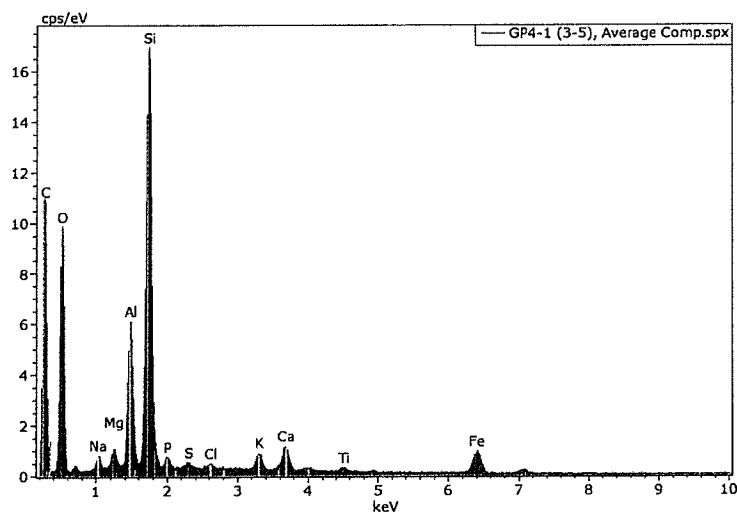


PLM Image



SEM Image

The EDS spectrum results, shown below, indicate this particle type is minerals. The analysis for this particle shows concentrations of carbon, oxygen, sodium, magnesium, aluminum, silicon, phosphorus, sulfur, chlorine, potassium, calcium, titanium and iron.



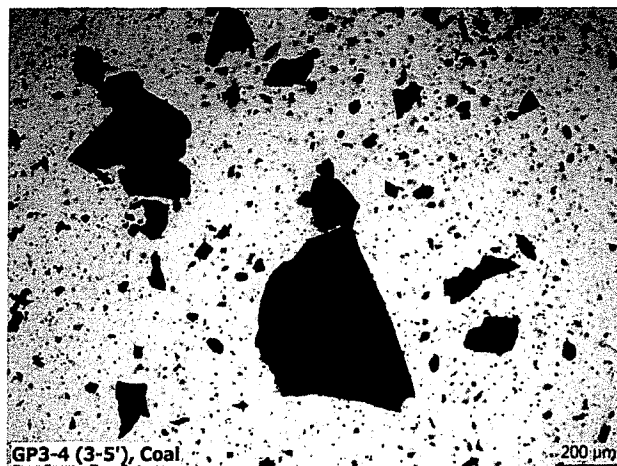
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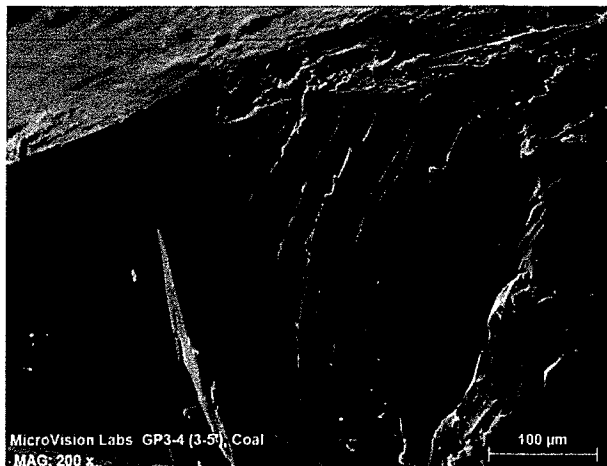
## Sample: GP3-4 (3-5')

### Number of Suspect Particle Types: Two (2)

**Coal:** This particle type consisted of six (6) shiny, black grains approximately 1-3mm in diameter. The PLM examination indicated this particle type to be consistent with coal. The PLM and SEM images of this particle type show the angular edges and typical conchoidal fractures found in coal.

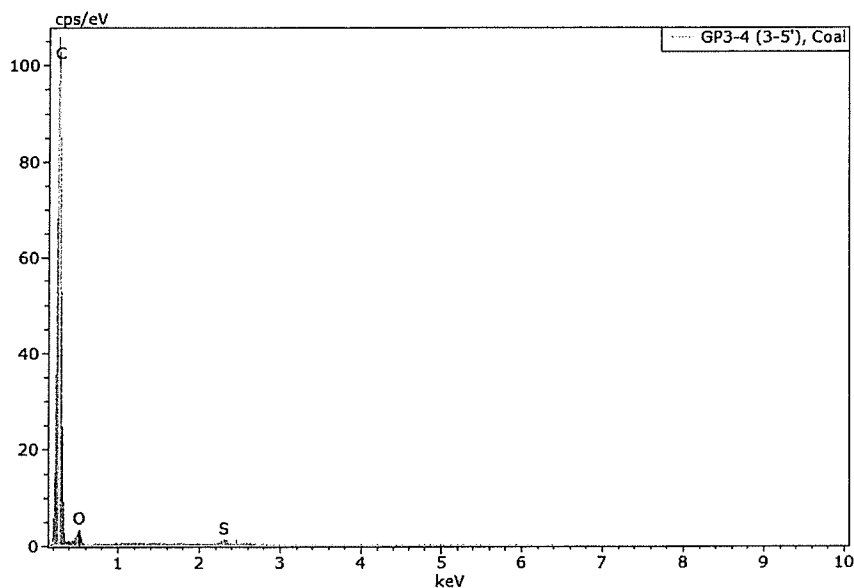


PLM Image



SEM Image

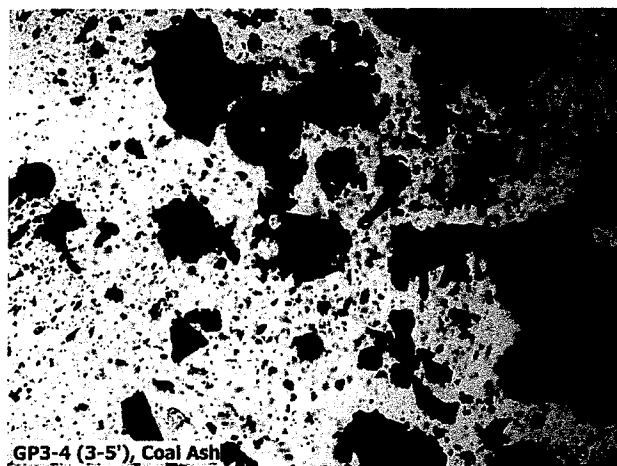
The EDS spectrum, shown below, confirms that this particle type is coal. The analysis for this particle shows concentrations of carbon, oxygen and sulfur.



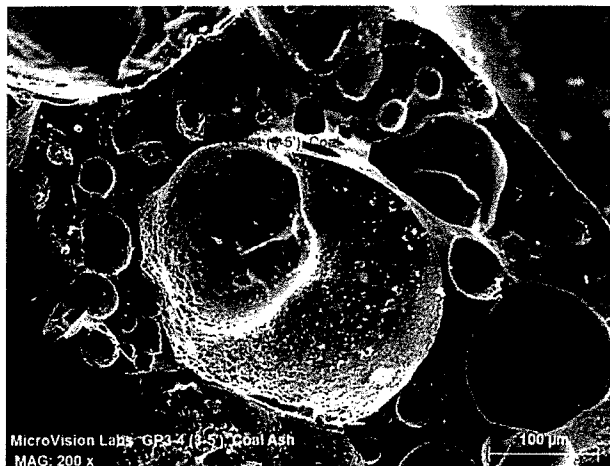
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**Coal Ash:** This particle type consisted of two (2) dark, porous grains approximately 2-4mm in diameter. The PLM examination indicated this particle type to be consistent with coal ash. The PLM and SEM images show the spherical gas voids that formed during combustion.

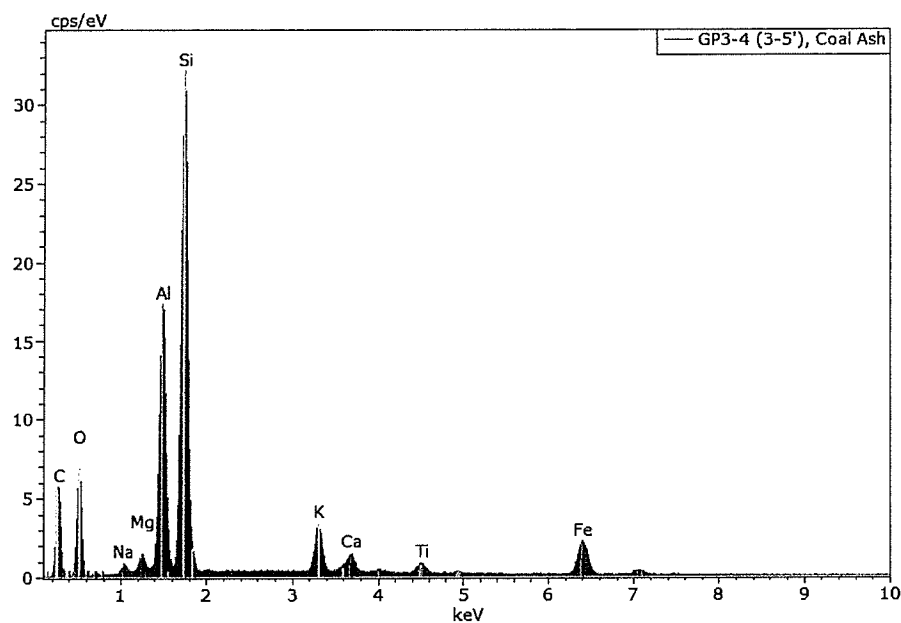


PLM Image



SEM Image

The EDS spectrum, shown below, indicates this particle type is coal ash. The analysis for this particle shows concentrations of carbon, oxygen, sodium, magnesium, aluminum, silicon, potassium, calcium, titanium and iron.

**ISO/IEC 17025:2017 Accredited**

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**Results Summary Table:**

<b>Sample Name</b>	<b>Material Detected</b>
<b>HB-5 (0-1')</b>	<b>Coal (light), Coal Ash (trace), Wood Ash (trace)</b>
<b>GP4-1 (3-5)</b>	<b>Minerals (heavy)</b>
<b>GP3-4 (3-5')</b>	<b>Coal (light), Coal Ash (trace)</b>

The concentrations of the particle types detected in these samples are listed in parenthesis in the table above and are based on the number of particles found and the relative difficulty in finding them. The concentration information is listed for informational purposes only and has no bearing on exemption status.

Please let us know if you have any questions about this analysis or if there is anything else we can do for you.

Sincerely,



Alexander Cloonan  
Analytical Microscopist

Reviewed by: AAC

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www.MicroVisionLabs.com



MICROVISION LABORATORIES, INC.			Chain Of Custody		MicroVision Labs Job#									
			Client Information		Project Information									
			Client: CDM Consultants, Inc.		Project Name: REAR 45									
			Billing Address: 6 Hudson Dr., North Attleboro, MA		Project Location: REAR 45, 1000 Main St									
			Phone: 508-536-2657		Project Number: 1830									
			Fax:		Project Manager: A. Sundqvist									
			Email: ASundqvist@cdmconsultants.com		PO#:									
Sample ID	Collected Date	Sampler's Initials	Coal Ash Test	Lead Paint	SEM/EDS	PLM/Light Microscopy	Soot ID	Dust ID	Unknown Mat'l ID	FTIR	Polished Cross Section	Particle Size Analysis	Wildfire	Other
1) HA-5 (0-1')	12/19/19	AMS	X											
2) GP4-1 (3-5')	12/19/19	AMS	X											
3) GP3-4 (3-5')	12/19/19	AMS	X											
4)														
5)														
6)														
7)														
8)														
9)														
10)														
11)														
12)														
Relinquished By: [Signature]			Date/Time: 12/27/19		Received By: [Signature]		Date/Time: 12/27/19		Turn Around Time and Notes:					
Hazardous Contaminants: YES / NO			If Yes, please list:											
Analytical Report Requested: YES / NO														
MicroVision Laboratories, Inc. 187 Billerica Road, Chelmsford, MA 01824 Phone 978-250-9909 Fax 978-250-9901 Toll Free 1-877-250-9909 microvisionlabs.com														

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 www.MicroVisionLabs.com



December 3, 2019

Alan Sundquist  
CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760

Project Location: Beaver St., Waltham, MA  
Client Job Number:  
Project Number: 1830  
Laboratory Work Order Number: 19K1403

Enclosed are results of analyses for samples received by the laboratory on November 22, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Michelle M. Koch  
Project Manager

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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760  
ATTN: Alan Sundquist

REPORT DATE: 12/3/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1830

### ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19K1403

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Beaver St., Waltham, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
HB-1	19K1403-01	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-5	19K1403-02	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-6	19K1403-03	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-7	19K1403-04	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-8	19K1403-05	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-9	19K1403-06	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-10	19K1403-07	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-11	19K1403-08	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-14	19K1403-09	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	
HB-15	19K1403-10	Soil		SM 2540G SW-846 6010D SW-846 7471B SW-846 8270D-E	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

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SW-846 6010D

**Qualifications:****L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

**Analyte & Samples(s) Qualified:****Arsenic**

B247130-BSD1

**Vanadium**

B247130-BSD1

SW-846 8270D-E

**Qualifications:****L-04**

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

**Analyte & Samples(s) Qualified:****Benzoic Acid**

19K1403-01[HB-1], 19K1403-02[HB-5], 19K1403-03[HB-6], 19K1403-04[HB-7], 19K1403-05[HB-8], 19K1403-06[HB-9], 19K1403-07[HB-10], 19K1403-08[HB-11], 19K1403-09[HB-14], 19K1403-10[HB-15], B246869-BLK1, B246869-BS1, B246869-BSD1

**MS-09**

Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

**Analyte & Samples(s) Qualified:****Benzidine**

19K1403-02[HB-5], B246869-MS1, B246869-MSD1

**Benzoic Acid**

19K1403-02[HB-5], B246869-MS1, B246869-MSD1

**Pyridine**

19K1403-02[HB-5], B246869-MS1, B246869-MSD1

**V-04**

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

**Analyte & Samples(s) Qualified:****Benzidine**

19K1403-01[HB-1], 19K1403-02[HB-5], 19K1403-03[HB-6], 19K1403-04[HB-7], 19K1403-05[HB-8], 19K1403-06[HB-9], 19K1403-07[HB-10], 19K1403-08[HB-11], 19K1403-09[HB-14], 19K1403-10[HB-15], B246869-BLK1, B246869-BS1, B246869-BSD1, B246869-MS1, B246869-MSD1, S043199-CCV1

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:****Benzidine**

19K1403-01[HB-1], 19K1403-02[HB-5], 19K1403-03[HB-6], 19K1403-04[HB-7], 19K1403-05[HB-8], 19K1403-06[HB-9], 19K1403-07[HB-10], 19K1403-08[HB-11], 19K1403-09[HB-14], 19K1403-10[HB-15], B246869-BLK1, B246869-BS1, B246869-BSD1, B246869-MS1, B246869-MSD1, S043199-CCV1

**Hexachlorocyclopentadiene**

19K1403-01[HB-1], 19K1403-02[HB-5], 19K1403-03[HB-6], 19K1403-04[HB-7], 19K1403-05[HB-8], 19K1403-06[HB-9], 19K1403-07[HB-10], 19K1403-08[HB-11], 19K1403-09[HB-14], 19K1403-10[HB-15], B246869-BLK1, B246869-BS1, B246869-BSD1, B246869-MS1, B246869-MSD1, S043199-CCV1

**Pentachlorophenol**

19K1403-01[HB-1], 19K1403-02[HB-5], 19K1403-03[HB-6], 19K1403-04[HB-7], 19K1403-05[HB-8], 19K1403-06[HB-9], 19K1403-07[HB-10], 19K1403-08[HB-11], 19K1403-09[HB-14], 19K1403-10[HB-15], B246869-BLK1, B246869-BS1, B246869-BSD1, B246869-MS1, B246869-MSD1, S043199-CCV1

**V-34**

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

**Analyte & Samples(s) Qualified:****4-Chloroaniline**

19K1403-01[HB-1], 19K1403-02[HB-5], 19K1403-03[HB-6], 19K1403-04[HB-7], 19K1403-05[HB-8], 19K1403-06[HB-9], 19K1403-07[HB-10], 19K1403-08[HB-11], 19K1403-09[HB-14], 19K1403-10[HB-15], B246869-BLK1, B246869-BS1, B246869-BSD1, B246869-MS1, B246869-MSD1, S043199-CCV1

**V-35**

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

**Analyte & Samples(s) Qualified:****Benzidine**

19K1403-01[HB-1], 19K1403-02[HB-5], 19K1403-03[HB-6], 19K1403-04[HB-7], 19K1403-05[HB-8], 19K1403-06[HB-9], 19K1403-07[HB-10], 19K1403-08[HB-11], 19K1403-09[HB-14], 19K1403-10[HB-15], B246869-BLK1, B246869-BS1, B246869-BSD1, B246869-MS1, B246869-MSD1, S043199-CCV1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington

Technical Representative



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-1

Sampled: 11/19/2019 10:00

Sample ID: 19K1403-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Acenaphthylene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Acetophenone	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Aniline	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Anthracene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Benzidine	ND	1.0	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Benzo(a)anthracene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Benzo(a)pyrene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Benzo(b)fluoranthene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Benzo(g,h,i)perylene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Benzo(k)fluoranthene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Benzoic Acid	ND	1.5	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Bis(2-chloroethoxy)methane	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Bis(2-chloroethyl)ether	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Bis(2-chloroisopropyl)ether	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
4-Bromophenylphenylether	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Butylbenzylphthalate	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Carbazole	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
4-Chloroaniline	ND	1.0	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
4-Chloro-3-methylphenol	ND	1.0	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2-Chloronaphthalene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2-Chlorophenol	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
4-Chlorophenylphenylether	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Chrysene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Dibenz(a,h)anthracene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Dibenzofuran	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Di-n-butylphthalate	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
1,2-Dichlorobenzene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
1,3-Dichlorobenzene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
1,4-Dichlorobenzene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
3,3-Dichlorobenzidine	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2,4-Dichlorophenol	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Diethylphthalate	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2,4-Dimethylphenol	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Dimethylphthalate	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
4,6-Dinitro-2-methylphenol	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2,4-Dinitrophenol	ND	1.0	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2,4-Dinitrotoluene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2,6-Dinitrotoluene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Di-n-octylphthalate	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2,2-Diphenylhydrazine/Azobenzene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Fluoranthene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Fluorene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-1

Sampled: 11/19/2019 10:00

Sample ID: 19K1403-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Hexachlorobutadiene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Hexachlorocyclopentadiene	ND	0.51	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Hexachloroethane	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Indeno(1,2,3-cd)pyrene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Isophorone	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
1-Methylnaphthalene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2-Methylnaphthalene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2-Methylphenol	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
3/4-Methylphenol	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Naphthalene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2-Nitroaniline	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
3-Nitroaniline	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
4-Nitroaniline	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Nitrobenzene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2-Nitrophenol	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
4-Nitrophenol	ND	1.0	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
N-Nitrosodimethylamine	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
N-Nitrosodi-n-propylamine	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Pentachloronitrobenzene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Pentachlorophenol	ND	0.51	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Phenanthrene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Phenol	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Pyrene	ND	0.26	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Pyridine	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
1,2,4-Trichlorobenzene	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2,4,5-Trichlorophenol	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
2,4,6-Trichlorophenol	ND	0.51	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:30	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		75.9	30-130					11/27/19 18:30	
Phenol-d6		75.9	30-130					11/27/19 18:30	
Nitrobenzene-d5		72.6	30-130					11/27/19 18:30	
2-Fluorobiphenyl		71.9	30-130					11/27/19 18:30	
2,4,6-Tribromophenol		79.2	30-130					11/27/19 18:30	
p-Terphenyl-d14		78.4	30-130					11/27/19 18:30	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-1

Sampled: 11/19/2019 10:00

Sample ID: 19K1403-01

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:28	tbc
Arsenic	3.2	2.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:28	tbc
Barium	47	2.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:28	tbc
Beryllium	0.57	0.25	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:28	tbc
Cadmium	ND	0.25	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:28	tbc
Chromium	11	0.50	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:28	tbc
Lead	73	0.74	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:28	tbc
Mercury	0.15	0.036	mg/Kg dry	1		SW-846 7471B	11/26/19	11/26/19 18:38	AJL
Nickel	9.0	0.50	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:28	tbc
Selenium	ND	5.0	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:10	TBC
Silver	ND	0.50	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:10	TBC
Thallium	ND	2.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:28	tbc
Vanadium	34	0.99	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 17:42	TBC
Zinc	44	0.99	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:28	tbc

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-1

Sampled: 11/19/2019 10:00

Sample ID: 19K1403-01

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	66.3		% Wt	1		SM 2540G	11/25/19	11/26/19 10:34	adb

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-5

Sampled: 11/19/2019 12:00

Sample ID: 19K1403-02

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Acenaphthylene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Acetophenone	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Aniline	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Benzidine	ND	0.82	mg/Kg dry	1	MS-09, V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Benzo(a)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Benzo(a)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Benzo(b)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Benzo(g,h,i)perylene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Benzo(k)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Benzoic Acid	ND	1.2	mg/Kg dry	1	L-04, MS-09	SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Bis(2-chloroethoxy)methane	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Bis(2-chloroethyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Bis(2-chloroisopropyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
4-Bromophenylphenylether	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Isobutylbenzylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Carbazole	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
4-Chloroaniline	ND	0.82	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
4-Chloro-3-methylphenol	ND	0.82	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2-Chloronaphthalene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2-Chlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
4-Chlorophenylphenylether	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Chrysene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Dibenz(a,h)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Dibenzofuran	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Di-n-butylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
1,2-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
1,3-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
1,4-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2,4-Dichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Diethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2,4-Dimethylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Dimethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
4,6-Dinitro-2-methylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2,4-Dinitrophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2,4-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2,6-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Di-n-octylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-5

Sampled: 11/19/2019 12:00

Sample ID: 19K1403-02

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Fluorene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Hexachlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Hexachlorobutadiene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Hexachlorocyclopentadiene	ND	0.42	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Hexachloroethane	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Indeno(1,2,3-cd)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Isophorone	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
1-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2-Methylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
3/4-Methylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Naphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2-Nitroaniline	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
3-Nitroaniline	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
4-Nitroaniline	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Nitrobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2-Nitrophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
4-Nitrophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
N-Nitrosodimethylamine	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
N-Nitrosodi-n-propylamine	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Pentachloronitrobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Pentachlorophenol	ND	0.42	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Phenanthrene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Phenol	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
Pyridine	ND	0.42	mg/Kg dry	1	MS-09	SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
1,2,4-Trichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2,4,5-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB
2,4,6-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 18:53	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	75.4	30-130	
Phenol-d6	76.7	30-130	
Nitrobenzene-d5	74.3	30-130	
2-Fluorobiphenyl	77.7	30-130	
2,4,6-Tribromophenol	84.6	30-130	
p-Terphenyl-d14	98.9	30-130	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-5

Sampled: 11/19/2019 12:00

Sample ID: 19K1403-02

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	32	2.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:34	tbc
Arsenic	11	2.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:34	tbc
Barium	450	2.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:34	tbc
Beryllium	0.28	0.21	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:34	tbc
Cadmium	29	0.21	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:34	tbc
Chromium	73	0.41	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:34	tbc
Lead	2700	0.62	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:34	tbc
Mercury	0.90	0.031	mg/Kg dry	1		SW-846 7471B	11/26/19	11/26/19 18:40	AJL
Nickel	170	0.41	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:34	tbc
Selenium	ND	4.1	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:16	TBC
Silver	130	0.41	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:16	TBC
Thallium	ND	2.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:34	tbc
Vanadium	27	0.83	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 17:49	TBC
Zinc	5100	4.1	mg/Kg dry	5		SW-846 6010D	11/26/19	12/3/19 12:21	MJH

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-5

Sampled: 11/19/2019 12:00

Sample ID: 19K1403-02

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	80.3		% Wt	1		SM 2540G	11/25/19	11/26/19 10:35	adb



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-6

Sampled: 11/20/2019 08:30

Sample ID: 19K1403-03

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Acenaphthylene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Acetophenone	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Aniline	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Benzidine	ND	1.2	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Benzo(a)anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Benzo(a)pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Benzo(b)fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Benzo(g,h,i)perylene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Benzo(k)fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Benzoic Acid	ND	1.8	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Bis(2-chloroethoxy)methane	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Bis(2-chloroethyl)ether	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Bis(2-chloroisopropyl)ether	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
4-Bromophenylphenylether	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Butylbenzylphthalate	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Carbazole	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
4-Chloroaniline	ND	1.2	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
4-Chloro-3-methylphenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2-Chloronaphthalene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2-Chlorophenol	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
4-Chlorophenylphenylether	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Chrysene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Dibenz(a,h)anthracene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Dibenzofuran	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Di-n-butylphthalate	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
1,2-Dichlorobenzene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
1,3-Dichlorobenzene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
1,4-Dichlorobenzene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
3,3-Dichlorobenzidine	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2,4-Dichlorophenol	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Diethylphthalate	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2,4-Dimethylphenol	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Dimethylphthalate	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
4,6-Dinitro-2-methylphenol	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2,4-Dinitrophenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2,4-Dinitrotoluene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2,6-Dinitrotoluene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Di-n-octylphthalate	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
4,4'-Diphenylhydrazine/Azobenzene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Fluoranthene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Fluorene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-6

Sampled: 11/20/2019 08:30

Sample ID: 19K1403-03

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Hexachlorobutadiene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Hexachlorocyclopentadiene	ND	0.60	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Hexachloroethane	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Indeno(1,2,3-cd)pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Isophorone	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
1-Methylnaphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2-Methylnaphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2-Methylphenol	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
3/4-Methylphenol	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Naphthalene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2-Nitroaniline	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
3-Nitroaniline	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
4-Nitroaniline	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Nitrobenzene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2-Nitrophenol	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
4-Nitrophenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
-Nitrosodimethylamine	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
N-Nitrosodi-n-propylamine	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Pentachloronitrobenzene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Pentachlorophenol	ND	0.60	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Phenanthrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Phenol	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Pyrene	ND	0.30	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Pyridine	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
1,2,4-Trichlorobenzene	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2,4,5-Trichlorophenol	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
2,4,6-Trichlorophenol	ND	0.60	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:15	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		76.2	30-130					11/27/19 19:15	
Phenol-d6		77.6	30-130					11/27/19 19:15	
Nitrobenzene-d5		71.5	30-130					11/27/19 19:15	
2-Fluorobiphenyl		71.6	30-130					11/27/19 19:15	
2,4,6-Tribromophenol		77.7	30-130					11/27/19 19:15	
p-Terphenyl-d14		80.1	30-130					11/27/19 19:15	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-6

Sampled: 11/20/2019 08:30

Sample ID: 19K1403-03

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:41	tbc
Arsenic	5.3	2.9	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:41	tbc
Barium	45	2.9	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:41	tbc
Beryllium	0.43	0.29	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:41	tbc
Cadmium	ND	0.29	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:41	tbc
Chromium	14	0.58	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:41	tbc
Lead	170	0.87	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:41	tbc
Mercury	0.21	0.043	mg/Kg dry	1		SW-846 7471B	11/26/19	11/26/19 18:42	AJL
Nickel	22	0.58	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:41	tbc
Selenium	ND	5.8	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:23	TBC
Silver	ND	0.58	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:23	TBC
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:41	tbc
Vanadium	41	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:09	TBC
Zinc	63	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:41	tbc

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-6

Sampled: 11/20/2019 08:30

Sample ID: 19K1403-03

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	55.9		% Wt	1		SM 2540G	11/25/19	11/26/19 10:36	adb

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-7

Sampled: 11/20/2019 09:00

Sample ID: 19K1403-04

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Acenaphthylene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Acetophenone	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Aniline	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Anthracene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Benzidine	ND	1.2	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Benzo(a)anthracene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Benzo(a)pyrene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Benzo(b)fluoranthene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Benzo(g,h,i)perylene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Benzo(k)fluoranthene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Benzoic Acid	ND	1.9	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Bis(2-chloroethoxy)methane	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Bis(2-chloroethyl)ether	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Bis(2-chloroisopropyl)ether	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
4-Bromophenylphenylether	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Butylbenzylphthalate	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Carbazole	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
4-Chloroaniline	ND	1.2	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
4-Chloro-3-methylphenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2-Chloronaphthalene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2-Chlorophenol	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
4-Chlorophenylphenylether	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Chrysene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Dibenz(a,h)anthracene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Dibenzofuran	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Di-n-butylphthalate	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
1,2-Dichlorobenzene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
1,3-Dichlorobenzene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
1,4-Dichlorobenzene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
3,3-Dichlorobenzidine	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2,4-Dichlorophenol	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Diethylphthalate	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2,4-Dimethylphenol	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Dimethylphthalate	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
4,6-Dinitro-2-methylphenol	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2,4-Dinitrophenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2,4-Dinitrotoluene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2,6-Dinitrotoluene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Di-n-octylphthalate	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2-Diphenylhydrazine/Azobenzene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Fluoranthene	0.39	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Fluorene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-7

Sampled: 11/20/2019 09:00

Sample ID: 19K1403-04

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Hexachlorobutadiene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Hexachlorocyclopentadiene	ND	0.64	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Hexachloroethane	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Indeno(1,2,3-cd)pyrene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Isophorone	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
1-Methylnaphthalene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2-Methylnaphthalene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2-Methylphenol	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
3/4-Methylphenol	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Naphthalene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2-Nitroaniline	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
3-Nitroaniline	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
4-Nitroaniline	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Nitrobenzene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2-Nitrophenol	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
4-Nitrophenol	ND	1.2	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
N-Nitrosodimethylamine	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
N-Nitrosodi-n-propylamine	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Pentachloronitrobenzene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Pentachlorophenol	ND	0.64	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Phenanthrene	ND	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Phenol	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Pyrene	0.43	0.32	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Pyridine	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
1,2,4-Trichlorobenzene	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2,4,5-Trichlorophenol	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
2,4,6-Trichlorophenol	ND	0.64	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 19:38	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		53.6	30-130					11/27/19 19:38	
Phenol-d6		57.7	30-130					11/27/19 19:38	
Nitrobenzene-d5		51.5	30-130					11/27/19 19:38	
2-Fluorobiphenyl		56.8	30-130					11/27/19 19:38	
2,4,6-Tribromophenol		61.8	30-130					11/27/19 19:38	
p-Terphenyl-d14		68.6	30-130					11/27/19 19:38	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-7

Sampled: 11/20/2019 09:00

Sample ID: 19K1403-04

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:47	tbc
Arsenic	9.1	3.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:47	tbc
Barium	47	3.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:47	tbc
Beryllium	0.47	0.31	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:47	tbc
Cadmium	ND	0.31	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:47	tbc
Chromium	15	0.62	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:47	tbc
Lead	180	0.93	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:47	tbc
Mercury	0.30	0.046	mg/Kg dry	1		SW-846 7471B	11/26/19	11/26/19 18:43	AJL
Nickel	22	0.62	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:47	tbc
Selenium	ND	6.2	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:29	TBC
Silver	ND	0.62	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:29	TBC
Thallium	ND	3.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:47	tbc
Vanadium	47	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:15	TBC
Zinc	64	1.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:47	tbc

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-7

Sampled: 11/20/2019 09:00

Sample ID: 19K1403-04

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	53.1		% Wt	1		SM 2540G	11/25/19	11/26/19 10:36	adb



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-8

Sampled: 11/20/2019 09:30

Sample ID: 19K1403-05

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Acenaphthylene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Acetophenone	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Aniline	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Anthracene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Benzidine	ND	1.4	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Benzo(a)anthracene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Benzo(a)pyrene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Benzo(b)fluoranthene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Benzo(g,h,i)perylene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Benzo(k)fluoranthene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Benzoic Acid	ND	2.1	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Bis(2-chloroethoxy)methane	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Bis(2-chloroethyl)ether	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Bis(2-chloroisopropyl)ether	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
4-Bromophenylphenylether	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Butylbenzylphthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Carbazole	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
4-Chloroaniline	ND	1.4	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
4-Chloro-3-methylphenol	ND	1.4	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2-Chloronaphthalene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2-Chlorophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
4-Chlorophenylphenylether	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Chrysene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Dibenz(a,h)anthracene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Dibenzofuran	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Di-n-butylphthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
1,2-Dichlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
1,3-Dichlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
1,4-Dichlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
3,3-Dichlorobenzidine	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2,4-Dichlorophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Diethylphthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2,4-Dimethylphenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Dimethylphthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
4,6-Dinitro-2-methylphenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2,4-Dinitrotoluene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2,6-Dinitrotoluene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Di-n-octylphthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2-Diphenylhydrazine/Azobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Fluoranthene	0.43	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Fluorene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-8

Sampled: 11/20/2019 09:30

Sample ID: 19K1403-05

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Hexachlorobutadiene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Hexachlorocyclopentadiene	ND	0.73	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Hexachloroethane	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Indeno(1,2,3-cd)pyrene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Isophorone	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
1-Methylnaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2-Methylnaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2-Methylphenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
3/4-Methylphenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Naphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2-Nitroaniline	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
3-Nitroaniline	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
4-Nitroaniline	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Nitrobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2-Nitrophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
4-Nitrophenol	ND	1.4	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
-Nitrosodimethylamine	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
N-Nitrosodi-n-propylamine	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Pentachloronitrobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Pentachlorophenol	ND	0.73	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Phenanthrene	ND	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Phenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Pyrene	0.48	0.36	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Pyridine	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
1,2,4-Trichlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2,4,5-Trichlorophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
2,4,6-Trichlorophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:01	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	68.8	30-130						11/27/19 20:01	
Phenol-d6	71.0	30-130						11/27/19 20:01	
Nitrobenzene-d5	66.6	30-130						11/27/19 20:01	
2-Fluorobiphenyl	68.4	30-130						11/27/19 20:01	
2,4,6-Tribromophenol	76.9	30-130						11/27/19 20:01	
p-Terphenyl-d14	84.1	30-130						11/27/19 20:01	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-8

Sampled: 11/20/2019 09:30

Sample ID: 19K1403-05

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.6	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:53	tbc
Arsenic	5.3	3.6	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:53	tbc
Barium	51	3.6	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:53	tbc
Beryllium	0.54	0.36	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:53	tbc
Cadmium	ND	0.36	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:53	tbc
Chromium	16	0.72	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:53	tbc
Lead	160	1.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:53	tbc
Mercury	0.22	0.057	mg/Kg dry	1		SW-846 7471B	11/26/19	11/26/19 18:45	AJL
Nickel	13	0.72	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:53	tbc
Selenium	ND	7.2	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:35	TBC
Silver	ND	0.72	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:35	TBC
Thallium	ND	3.6	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:53	tbc
Vanadium	49	1.4	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:22	TBC
Zinc	78	1.4	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:53	tbc

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-8

Sampled: 11/20/2019 09:30

Sample ID: 19K1403-05

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	45.7		% Wt	1		SM 2540G	11/25/19	11/26/19 10:36	adb

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-9

Sampled: 11/20/2019 10:00

Sample ID: 19K1403-06

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Acenaphthylene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Acetophenone	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Aniline	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Anthracene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Benzidine	ND	1.5	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Benzo(a)anthracene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Benzo(a)pyrene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Benzo(b)fluoranthene	0.43	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Benzo(g,h,i)perylene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Benzo(k)fluoranthene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Benzoic Acid	ND	2.3	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Bis(2-chlorooctoxy)methane	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Bis(2-chloroethyl)ether	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Bis(2-chloroisopropyl)ether	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
4-Bromophenylphenylether	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Butylbenzylphthalate	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Carbazole	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
4-Chloroaniline	ND	1.5	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
4-Chloro-3-methylphenol	ND	1.5	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2-Chloronaphthalene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2-Chlorophenol	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
4-Chlorophenylphenylether	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Chrysene	0.41	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Dibenz(a,h)anthracene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Dibenzofuran	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Di-n-butylphthalate	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
1,2-Dichlorobenzene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
1,3-Dichlorobenzene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
1,4-Dichlorobenzene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
3,3-Dichlorobenzidine	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2,4-Dichlorophenol	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Diethylphthalate	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2,4-Dimethylphenol	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Dimethylphthalate	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
4,6-Dinitro-2-methylphenol	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2,4-Dinitrotoluene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2,6-Dinitrotoluene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Di-n-octylphthalate	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2-Diphenylhydrazine/Azobenzene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Fluoranthene	0.68	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Fluorene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-9

Sampled: 11/20/2019 10:00

Sample ID: 19K1403-06

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Hexachlorobutadiene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Hexachlorocyclopentadiene	ND	0.79	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Hexachloroethane	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Indeno(1,2,3-cd)pyrene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Isophorone	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
1-Methylnaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2-Methylnaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2-Methylphenol	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
3/4-Methylphenol	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Naphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2-Nitroaniline	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
3-Nitroaniline	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
4-Nitroaniline	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Nitrobenzene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2-Nitrophenol	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
4-Nitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
N-Nitrosodimethylamine	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
N-Nitrosodi-n-propylamine	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Pentachloronitrobenzene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Pentachlorophenol	ND	0.79	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Phenanthrene	ND	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Phenol	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Pyrene	0.74	0.39	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Pyridine	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
1,2,4-Trichlorobenzene	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2,4,5-Trichlorophenol	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
2,4,6-Trichlorophenol	ND	0.79	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:23	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	63.6	30-130						11/27/19 20:23	
Phenol-d6	65.6	30-130						11/27/19 20:23	
Nitrobenzene-d5	60.8	30-130						11/27/19 20:23	
2-Fluorobiphenyl	61.6	30-130						11/27/19 20:23	
2,4,6-Tribromophenol	67.2	30-130						11/27/19 20:23	
p-Terphenyl-d14	73.7	30-130						11/27/19 20:23	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-9

Sampled: 11/20/2019 10:00

Sample ID: 19K1403-06

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.8	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:59	tbc
Arsenic	7.0	3.8	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:59	tbc
Barium	54	3.8	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:59	tbc
Beryllium	0.41	0.38	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:59	tbc
Cadmium	ND	0.38	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:59	tbc
Chromium	16	0.76	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:59	tbc
Lead	200	1.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:59	tbc
Mercury	0.22	0.059	mg/Kg dry	1		SW-846 7471B	11/26/19	11/26/19 18:46	AJL
Nickel	18	0.76	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:59	tbc
Selenium	ND	7.6	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:42	TBC
Silver	ND	0.76	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:42	TBC
Thallium	ND	3.8	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:59	tbc
Vanadium	42	1.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:28	TBC
Zinc	140	1.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:59	tbc

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-9

Sampled: 11/20/2019 10:00

Sample ID: 19K1403-06

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	42.7		% Wt	1		SM 2540G	11/25/19	11/26/19 10:37	adb



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-10

Sampled: 11/20/2019 10:30

Sample ID: 19K1403-07

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Acenaphthylene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Acetophenone	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Aniline	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Anthracene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Benzidine	ND	1.5	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Benzo(a)anthracene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Benzo(a)pyrene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Benzo(b)fluoranthene	0.39	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Benzo(g,h,i)perylene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Benzo(k)fluoranthene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Benzoic Acid	ND	2.2	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Bis(2-chloroethoxy)methane	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Bis(2-chloroethyl)ether	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Bis(2-chloroisopropyl)ether	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
4-Bromophenylphenylether	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Butylbenzylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Carbazole	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
4-Chloroaniline	ND	1.5	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
4-Chloro-3-methylphenol	ND	1.5	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2-Chloronaphthalene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2-Chlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
4-Chlorophenylphenylether	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Chrysene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Dibenzofuran	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Di-n-butylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
1,2-Dichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
1,3-Dichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
1,4-Dichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2,4-Dichlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Diethylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2,4-Dimethylphenol	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Dimethylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
4,6-Dinitro-2-methylphenol	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2,4-Dinitrotoluene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2,6-Dinitrotoluene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Di-n-octylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2-Diphenylhydrazine/Azobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Fluoranthene	0.60	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Fluorene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-10

Sampled: 11/20/2019 10:30

Sample ID: 19K1403-07

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Hexachlorobutadiene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Hexachlorocyclopentadiene	ND	0.75	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Hexachloroethane	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Indeno(1,2,3-cd)pyrene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Isophorone	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
1-Methylnaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2-Methylnaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2-Methylphenol	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
3/4-Methylphenol	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Naphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2-Nitroaniline	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
3-Nitroaniline	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
4-Nitroaniline	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Nitrobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2-Nitrophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
4-Nitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
1-Nitrosodimethylamine	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
N-Nitrosodi-n-propylamine	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Pentachloronitrobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Pentachlorophenol	ND	0.75	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Phenanthrene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Phenol	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Pyrene	0.67	0.38	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Pyridine	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
1,2,4-Trichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2,4,5-Trichlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
2,4,6-Trichlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 20:46	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	63.2	30-130						11/27/19 20:46	
Phenol-d6	65.7	30-130						11/27/19 20:46	
Nitrobenzene-d5	61.6	30-130						11/27/19 20:46	
2-Fluorobiphenyl	67.0	30-130						11/27/19 20:46	
2,4,6-Tribromophenol	71.6	30-130						11/27/19 20:46	
p-Terphenyl-d14	85.4	30-130						11/27/19 20:46	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-10

Sampled: 11/20/2019 10:30

Sample ID: 19K1403-07

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.8	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:04	tbc
Arsenic	12	3.8	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:04	tbc
Barium	50	3.8	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:04	tbc
Beryllium	0.51	0.38	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:04	tbc
Cadmium	0.41	0.38	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:04	tbc
Chromium	16	0.77	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:04	tbc
Lead	270	1.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:04	tbc
Mercury	0.29	0.056	mg/Kg dry	1		SW-846 7471B	11/26/19	11/26/19 18:48	AJL
Nickel	19	0.77	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:04	tbc
Selenium	ND	7.7	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:48	TBC
Silver	ND	0.77	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 0:48	TBC
Thallium	ND	3.8	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:04	tbc
Vanadium	66	1.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:34	TBC
Zinc	110	1.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:04	tbc

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-10

Sampled: 11/20/2019 10:30

Sample ID: 19K1403-07

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	44.1		% Wt	1		SM 2540G	11/25/19	11/26/19 10:37	adb

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-11

Sampled: 11/20/2019 11:00

Sample ID: 19K1403-08

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Acenaphthylene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Acetophenone	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Aniline	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Anthracene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Benzidine	ND	1.1	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Benzo(a)anthracene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Benzo(a)pyrene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Benzo(b)fluoranthene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Benzo(g,h,i)perylene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Benzo(k)fluoranthene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Benzoic Acid	ND	1.6	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Bis(2-chloroethoxy)methane	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Bis(2-chloroethyl)ether	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Bis(2-chloroisopropyl)ether	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
4-Bromophenylphenylether	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Butylbenzylphthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Carbazole	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
4-Chloroaniline	ND	1.1	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
4-Chloro-3-methylphenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2-Chloronaphthalene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2-Chlorophenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
4-Chlorophenylphenylether	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Chrysene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Dibenz(a,h)anthracene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Dibenzofuran	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Di-n-butylphthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
1,2-Dichlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
1,3-Dichlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
1,4-Dichlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
3,3-Dichlorobenzidine	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2,4-Dichlorophenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Diethylphthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2,4-Dimethylphenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Dimethylphthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
4,6-Dinitro-2-methylphenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2,4-Dinitrophenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2,4-Dinitrotoluene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2,6-Dinitrotoluene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Di-n-octylphthalate	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Fluoranthene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Fluorene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-11

Sampled: 11/20/2019 11:00

Sample ID: 19K1403-08

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Hexachlorobutadiene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Hexachlorocyclopentadiene	ND	0.56	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Hexachloroethane	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Indeno(1,2,3-cd)pyrene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Isophorone	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
1-Methylnaphthalene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2-Methylnaphthalene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2-Methylphenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
3/4-Methylphenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Naphthalene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2-Nitroaniline	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
3-Nitroaniline	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
4-Nitroaniline	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Nitrobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2-Nitrophenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
4-Nitrophenol	ND	1.1	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
N-Nitrosodimethylamine	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
N-Nitrosodi-n-propylamine	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Pentachloronitrobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Pentachlorophenol	ND	0.56	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Phenanthrene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Phenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Pyrene	ND	0.28	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Pyridine	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
1,2,4-Trichlorobenzene	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2,4,5-Trichlorophenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
2,4,6-Trichlorophenol	ND	0.56	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:09	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	65.4	30-130						11/27/19 21:09	
Phenol-d6	68.3	30-130						11/27/19 21:09	
Nitrobenzene-d5	64.8	30-130						11/27/19 21:09	
2-Fluorobiphenyl	69.5	30-130						11/27/19 21:09	
2,4,6-Tribromophenol	74.5	30-130						11/27/19 21:09	
p-Terphenyl-d14	89.2	30-130						11/27/19 21:09	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-11

Sampled: 11/20/2019 11:00

Sample ID: 19K1403-08

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:10	tbc
Arsenic	4.9	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:10	tbc
Barium	58	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:10	tbc
Beryllium	0.53	0.27	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:10	tbc
Cadmium	ND	0.27	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:10	tbc
Chromium	14	0.55	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:10	tbc
Lead	120	0.82	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:10	tbc
Mercury	0.11	0.039	mg/Kg dry	1		SW-846 7471B	11/26/19	11/26/19 18:50	AJL
Nickel	10	0.55	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:10	tbc
Selenium	ND	5.5	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 1:12	TBC
Silver	ND	0.55	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 1:12	TBC
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:10	tbc
Vanadium	38	1.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:41	TBC
Zinc	59	1.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:10	tbc

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-11

Sampled: 11/20/2019 11:00

Sample ID: 19K1403-08

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	60.5		% Wt	1		SM 2540G	11/25/19	11/26/19 10:37	adb



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-14

Sampled: 11/20/2019 12:00

Sample ID: 19K1403-09

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Acenaphthylene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Acetophenone	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Aniline	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Anthracene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Benzidine	ND	1.4	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Benzo(a)anthracene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Benzo(a)pyrene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Benzo(b)fluoranthene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Benzo(g,h,i)perylene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Benzo(k)fluoranthene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Benzoic Acid	ND	2.2	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Bis(2-chloroethoxy)methane	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Bis(2-chloroethyl)ether	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Bis(2-chloroisopropyl)ether	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
4-Bromophenylphenylether	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Butylbenzylphthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Carbazole	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
4-Chloroaniline	ND	1.4	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
4-Chloro-3-methylphenol	ND	1.4	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2-Chloronaphthalene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2-Chlorophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
4-Chlorophenylphenylether	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Chrysene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Dibenz(a,h)anthracene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Dibenzofuran	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Di-n-butylphthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
1,2-Dichlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
1,3-Dichlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
1,4-Dichlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
3,3-Dichlorobenzidine	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2,4-Dichlorophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Diethylphthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2,4-Dimethylphenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Dimethylphthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
4,6-Dinitro-2-methylphenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2,4-Dinitrotoluene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2,6-Dinitrotoluene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Di-n-octylphthalate	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2,2-Diphenylhydrazine/Azobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Fluoranthene	0.39	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Fluorene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-14

Sampled: 11/20/2019 12:00

Sample ID: 19K1403-09

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Hexachlorobutadiene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Hexachlorocyclopentadiene	ND	0.73	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Hexachloroethane	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Indeno(1,2,3-cd)pyrene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Isophorone	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
1-Methylnaphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2-Methylnaphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2-Methylphenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
3/4-Methylphenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Naphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2-Nitroaniline	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
3-Nitroaniline	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
4-Nitroaniline	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Nitrobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2-Nitrophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
4-Nitrophenol	ND	1.4	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
N-Nitrosodimethylamine	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
N-Nitrosodi-n-propylamine	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Pentachloronitrobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Pentachlorophenol	ND	0.73	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Phenanthrene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Phenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Pyrene	0.42	0.37	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Pyridine	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
1,2,4-Trichlorobenzene	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2,4,5-Trichlorophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
2,4,6-Trichlorophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:31	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorophenol	69.8		30-130				11/27/19 21:31		
Phenol-d6	74.2		30-130				11/27/19 21:31		
Nitrobenzene-d5	69.4		30-130				11/27/19 21:31		
2-Fluorobiphenyl	68.2		30-130				11/27/19 21:31		
2,4,6-Tribromophenol	74.4		30-130				11/27/19 21:31		
p-Terphenyl-d14	75.2		30-130				11/27/19 21:31		

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-14

Sampled: 11/20/2019 12:00

Sample ID: 19K1403-09

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:16	tbc
Arsenic	6.3	3.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:16	tbc
Barium	54	3.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:16	tbc
Beryllium	0.56	0.37	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:16	tbc
Cadmium	ND	0.37	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:16	tbc
Chromium	15	0.73	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:16	tbc
Lead	150	1.1	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:16	tbc
Mercury	0.23	0.054	mg/Kg dry	1		SW-846 7471B	11/26/19	11/26/19 18:51	AJL
Nickel	13	0.73	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:16	tbc
Selenium	ND	7.3	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 1:18	TBC
Silver	ND	0.73	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 1:18	TBC
Thallium	ND	3.7	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:16	tbc
Vanadium	54	1.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:47	TBC
Zinc	73	1.5	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:16	tbc



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-14

Sampled: 11/20/2019 12:00

Sample ID: 19K1403-09

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	45.7		% Wt	1		SM 2540G	11/25/19	11/26/19 10:38	adb

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-15

Sampled: 11/20/2019 13:00

Sample ID: 19K1403-10

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Acenaphthylene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Acetophenone	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Aniline	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Anthracene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Benzidine	ND	0.86	mg/Kg dry	1	V-35, V-04, V-05	SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Benzo(a)anthracene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Benzo(a)pyrene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Benzo(b)fluoranthene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Benzo(g,h,i)perylene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Benzo(k)fluoranthene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Benzoic Acid	ND	1.3	mg/Kg dry	1	L-04	SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Bis(2-chlorooctoxy)methane	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Bis(2-chloroethyl)ether	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Bis(2-chloroisopropyl)ether	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
4-Bromophenylphenylether	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Butylbenzylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Carbazole	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
4-Chloroaniline	ND	0.86	mg/Kg dry	1	V-34	SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
4-Chloro-3-methylphenol	ND	0.86	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2-Chloronaphthalene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2-Chlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
4-Chlorophenylphenylether	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Chrysene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Dibenz(a,h)anthracene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Dibenzofuran	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Di-n-butylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
1,2-Dichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
1,3-Dichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
1,4-Dichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
3,3-Dichlorobenzidine	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2,4-Dichlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Diethylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2,4-Dimethylphenol	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Dimethylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
4,6-Dinitro-2-methylphenol	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2,4-Dinitrophenol	ND	0.86	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2,4-Dinitrotoluene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2,6-Dinitrotoluene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Di-n-octylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Fluoranthene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Fluorene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-15

Sampled: 11/20/2019 13:00

Sample ID: 19K1403-10

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Hexachlorobutadiene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Hexachlorocyclopentadiene	ND	0.44	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Hexachloroethane	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Indeno(1,2,3-cd)pyrene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Isophorone	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
1-Methylnaphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2-Methylnaphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2-Methylphenol	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
3/4-Methylphenol	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Naphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2-Nitroaniline	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
3-Nitroaniline	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
4-Nitroaniline	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Nitrobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2-Nitrophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
4-Nitrophenol	ND	0.86	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
N-Nitrosodimethylamine	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
N-Nitrosodi-n-propylamine	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Pentachloronitrobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Pentachlorophenol	ND	0.44	mg/Kg dry	1	V-05	SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Phenanthrene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Phenol	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Pyrene	ND	0.22	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
Pyridine	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
1,2,4-Trichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2,4,5-Trichlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB
2,4,6-Trichlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D-E	11/24/19	11/27/19 21:54	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	72.7	30-130	11/27/19 21:54
Phenol-d6	77.1	30-130	11/27/19 21:54
Nitrobenzene-d5	68.6	30-130	11/27/19 21:54
2-Fluorobiphenyl	67.6	30-130	11/27/19 21:54
2,4,6-Tribromophenol	78.9	30-130	11/27/19 21:54
p-Terphenyl-d14	78.6	30-130	11/27/19 21:54

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-15

Sampled: 11/20/2019 13:00

Sample ID: 19K1403-10

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:33	tbc
Arsenic	3.8	2.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:33	tbc
Barium	46	2.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:33	tbc
Beryllium	0.38	0.22	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:33	tbc
Cadmium	ND	0.22	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:33	tbc
Chromium	11	0.44	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:33	tbc
Lead	83	0.66	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:33	tbc
Mercury	0.091	0.033	mg/Kg dry	1		SW-846 7471B	11/26/19	11/26/19 18:57	AJL
Nickel	7.2	0.44	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:33	tbc
Selenium	ND	4.4	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 1:25	TBC
Silver	ND	0.44	mg/Kg dry	1		SW-846 6010D	11/26/19	12/3/19 1:25	TBC
Thallium	ND	2.2	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:33	tbc
Vanadium	26	0.88	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 18:53	TBC
Zinc	45	0.88	mg/Kg dry	1		SW-846 6010D	11/26/19	11/27/19 19:33	tbc

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19K1403

Date Received: 11/22/2019

Field Sample #: HB-15

Sampled: 11/20/2019 13:00

Sample ID: 19K1403-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	76.0		% Wt	1		SM 2540G	11/25/19	11/26/19 10:38	adb



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### Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
19K1403-01 [HB-1]	B246947	11/25/19
19K1403-02 [HB-5]	B246947	11/25/19
19K1403-03 [HB-6]	B246947	11/25/19
19K1403-04 [HB-7]	B246947	11/25/19
19K1403-05 [HB-8]	B246947	11/25/19
19K1403-06 [HB-9]	B246947	11/25/19
19K1403-07 [HB-10]	B246947	11/25/19
19K1403-08 [HB-11]	B246947	11/25/19
19K1403-09 [HB-14]	B246947	11/25/19
19K1403-10 [HB-15]	B246947	11/25/19

Prep Method: SW-846 3050B-SW-846 6010D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1403-01 [HB-1]	B247130	1.52	50.0	11/26/19
19K1403-02 [HB-5]	B247130	1.51	50.0	11/26/19
19K1403-03 [HB-6]	B247130	1.54	50.0	11/26/19
19K1403-04 [HB-7]	B247130	1.52	50.0	11/26/19
19K1403-05 [HB-8]	B247130	1.52	50.0	11/26/19
19K1403-06 [HB-9]	B247130	1.54	50.0	11/26/19
19K1403-07 [HB-10]	B247130	1.48	50.0	11/26/19
19K1403-08 [HB-11]	B247130	1.51	50.0	11/26/19
19K1403-09 [HB-14]	B247130	1.50	50.0	11/26/19
19K1403-10 [HB-15]	B247130	1.49	50.0	11/26/19

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1403-01 [HB-1]	B247073	0.625	50.0	11/26/19
19K1403-02 [HB-5]	B247073	0.606	50.0	11/26/19
19K1403-03 [HB-6]	B247073	0.622	50.0	11/26/19
19K1403-04 [HB-7]	B247073	0.612	50.0	11/26/19
19K1403-05 [HB-8]	B247073	0.579	50.0	11/26/19
19K1403-06 [HB-9]	B247073	0.600	50.0	11/26/19
19K1403-07 [HB-10]	B247073	0.610	50.0	11/26/19
19K1403-08 [HB-11]	B247073	0.639	50.0	11/26/19
19K1403-09 [HB-14]	B247073	0.607	50.0	11/26/19
19K1403-10 [HB-15]	B247073	0.607	50.0	11/26/19

Prep Method: SW-846 3546-SW-846 8270D-E

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1403-01 [HB-1]	B246869	30.0	1.00	11/24/19
19K1403-02 [HB-5]	B246869	30.1	1.00	11/24/19
19K1403-03 [HB-6]	B246869	30.6	1.00	11/24/19
19K1403-04 [HB-7]	B246869	30.1	1.00	11/24/19
19K1403-05 [HB-8]	B246869	30.6	1.00	11/24/19
19K1403-06 [HB-9]	B246869	30.3	1.00	11/24/19
19K1403-07 [HB-10]	B246869	30.7	1.00	11/24/19
19K1403-08 [HB-11]	B246869	30.2	1.00	11/24/19
19K1403-09 [HB-14]	B246869	30.4	1.00	11/24/19

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**Sample Extraction Data**

Prep Method: SW-846 3546-SW-846 8270D-E

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1403-10 [HB-15]	B246869	30.3	1.00	11/24/19

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246869 - SW-846 3546										
Blank (B246869-BLK1)				Prepared: 11/24/19 Analyzed: 11/27/19						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzidine	ND	0.66	mg/Kg wet							V-04, V-05, V-35
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Benzoic Acid	ND	1.0	mg/Kg wet							L-04
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
Carbazole	ND	0.17	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							V-34
2-Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
4-Chlorophenylphenylether	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachlorocyclopentadiene	ND	0.34	mg/Kg wet							V-05
Hexachloroethane	ND	0.34	mg/Kg wet							
Benzo(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Phosphorane	ND	0.34	mg/Kg wet							
1-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B246869 - SW-846 3546</b>										
<b>Blank (B246869-BLK1)</b>										
					Prepared: 11/24/19 Analyzed: 11/27/19					
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
2-Nitroaniline	ND	0.34	mg/Kg wet							
3-Nitroaniline	ND	0.34	mg/Kg wet							
4-Nitroaniline	ND	0.34	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
N-Nitrosodimethylamine	ND	0.34	mg/Kg wet							
N-Nitrosodiphenylamine/Diphenylamine	ND	0.34	mg/Kg wet							
N-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet							
Pentachloronitrobenzene	ND	0.34	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							V-05
Phenanthrene	ND	0.17	mg/Kg wet							
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
1,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
1,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	5.51		mg/Kg wet	6.67		82.7	30-130			
Surrogate: Phenol-d6	5.60		mg/Kg wet	6.67		84.1	30-130			
Surrogate: Nitrobenzene-d5	2.58		mg/Kg wet	3.33		77.5	30-130			
Surrogate: 2-Fluorobiphenyl	2.76		mg/Kg wet	3.33		82.9	30-130			
Surrogate: 2,4,6-Tribromophenol	5.84		mg/Kg wet	6.67		87.5	30-130			
Surrogate: p-Terphenyl-d14	3.14		mg/Kg wet	3.33		94.3	30-130			
<b>LCS (B246869-BS1)</b>										
					Prepared: 11/24/19 Analyzed: 11/27/19					
Acenaphthene	1.09	0.17	mg/Kg wet	1.67		65.7	40-140			
Acenaphthylene	1.17	0.17	mg/Kg wet	1.67		70.0	40-140			
Acetophenone	1.11	0.34	mg/Kg wet	1.67		66.6	40-140			
Aniline	0.809	0.34	mg/Kg wet	1.67		48.5	10-140			†
Anthracene	1.25	0.17	mg/Kg wet	1.67		75.0	40-140			
Benzidine	1.85	0.66	mg/Kg wet	1.67		111	40-140			V-04, V-05, V-35
Benzo(a)anthracene	1.20	0.17	mg/Kg wet	1.67		72.2	40-140			
Benzo(a)pyrene	1.17	0.17	mg/Kg wet	1.67		70.2	40-140			
Benzo(b)fluoranthene	1.18	0.17	mg/Kg wet	1.67		71.0	40-140			
Benzo(g,h,i)perylene	1.15	0.17	mg/Kg wet	1.67		68.8	40-140			
Benzo(k)fluoranthene	1.21	0.17	mg/Kg wet	1.67		72.3	40-140			
Benzoic Acid	0.179	1.0	mg/Kg wet	1.67		10.7 *	30-130			L-04
Bis(2-chloroethoxy)methane	1.11	0.34	mg/Kg wet	1.67		66.6	40-140			
Bis(2-chloroethyl)ether	1.04	0.34	mg/Kg wet	1.67		62.4	40-140			
Bis(2-chloroisopropyl)ether	1.13	0.34	mg/Kg wet	1.67		67.6	40-140			
Bis(2-Ethylhexyl)phthalate	1.24	0.34	mg/Kg wet	1.67		74.2	40-140			
4-Bromophenylphenylether	1.17	0.34	mg/Kg wet	1.67		70.3	40-140			
Butylbenzylphthalate	1.23	0.34	mg/Kg wet	1.67		73.6	40-140			
Carbazole	1.20	0.17	mg/Kg wet	1.67		72.3	40-140			
Chloroaniline	0.893	0.66	mg/Kg wet	1.67		53.6	10-140			V-34 †
4-Chloro-3-methylphenol	1.23	0.66	mg/Kg wet	1.67		73.7	30-130			
2-Chloronaphthalene	0.986	0.34	mg/Kg wet	1.67		59.2	40-140			

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### QUALITY CONTROL

#### Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246869 - SW-846 3546										
LCS (B246869-BS1) Prepared: 11/24/19 Analyzed: 11/27/19										
2-Chlorophenol	1.11	0.34	mg/Kg wet	1.67		66.4	30-130			
4-Chlorophenylphenylether	1.16	0.34	mg/Kg wet	1.67		69.4	40-140			
Chrysene	1.19	0.17	mg/Kg wet	1.67		71.2	40-140			
Dibenz(a,h)anthracene	1.14	0.17	mg/Kg wet	1.67		68.5	40-140			
Dibenzofuran	1.20	0.34	mg/Kg wet	1.67		71.8	40-140			
Di-n-butylphthalate	1.24	0.34	mg/Kg wet	1.67		74.2	40-140			
1,2-Dichlorobenzene	1.02	0.34	mg/Kg wet	1.67		61.1	40-140			
1,3-Dichlorobenzene	0.991	0.34	mg/Kg wet	1.67		59.5	40-140			
1,4-Dichlorobenzene	0.995	0.34	mg/Kg wet	1.67		59.7	40-140			
3,3-Dichlorobenzidine	0.946	0.17	mg/Kg wet	1.67		56.8	20-140			†
2,4-Dichlorophenol	1.13	0.34	mg/Kg wet	1.67		67.6	30-130			
Diethylphthalate	1.16	0.34	mg/Kg wet	1.67		69.8	40-140			
2,4-Dimethylphenol	1.01	0.34	mg/Kg wet	1.67		60.8	30-130			
Dimethylphthalate	1.16	0.34	mg/Kg wet	1.67		69.7	40-140			
4,6-Dinitro-2-methylphenol	1.09	0.34	mg/Kg wet	1.67		65.5	30-130			
2,4-Dinitrophenol	0.601	0.66	mg/Kg wet	1.67		36.1	30-130			
2,4-Dinitrotoluene	1.30	0.34	mg/Kg wet	1.67		78.1	40-140			
2,6-Dinitrotoluene	1.32	0.34	mg/Kg wet	1.67		79.4	40-140			
Di-n-octylphthalate	1.29	0.34	mg/Kg wet	1.67		77.4	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.24	0.34	mg/Kg wet	1.67		74.1	40-140			
oranthene	1.25	0.17	mg/Kg wet	1.67		75.0	40-140			
rfluorene	1.20	0.17	mg/Kg wet	1.67		71.8	40-140			
Hexachlorobenzene	1.25	0.34	mg/Kg wet	1.67		75.1	40-140			
Hexachlorobutadiene	0.990	0.34	mg/Kg wet	1.67		59.4	40-140			
Hexachlorocyclopentadiene	0.692	0.34	mg/Kg wet	1.67		41.5	40-140			V-05
Hexachloroethane	1.01	0.34	mg/Kg wet	1.67		60.7	40-140			
Indeno(1,2,3-cd)pyrene	1.24	0.17	mg/Kg wet	1.67		74.6	40-140			
Isophorone	1.16	0.34	mg/Kg wet	1.67		69.8	40-140			
1-Methylnaphthalene	1.01	0.17	mg/Kg wet	1.67		60.5	40-140			
2-Methylnaphthalene	1.21	0.17	mg/Kg wet	1.67		72.5	40-140			
2-Methylphenol	1.08	0.34	mg/Kg wet	1.67		64.9	30-130			
3/4-Methylphenol	1.15	0.34	mg/Kg wet	1.67		69.1	30-130			
Naphthalene	1.09	0.17	mg/Kg wet	1.67		65.3	40-140			
2-Nitroaniline	1.30	0.34	mg/Kg wet	1.67		77.8	40-140			
3-Nitroaniline	1.21	0.34	mg/Kg wet	1.67		72.7	30-140			†
4-Nitroaniline	1.33	0.34	mg/Kg wet	1.67		79.6	40-140			
Nitrobenzene	1.13	0.34	mg/Kg wet	1.67		67.6	40-140			
2-Nitrophenol	1.26	0.34	mg/Kg wet	1.67		75.9	30-130			
4-Nitrophenol	1.39	0.66	mg/Kg wet	1.67		83.4	30-130			
N-Nitrosodimethylamine	0.944	0.34	mg/Kg wet	1.67		56.7	40-140			
N-Nitrosodiphenylamine/Diphenylamine	1.27	0.34	mg/Kg wet	1.67		76.2	40-140			
N-Nitrosodi-n-propylamine	1.11	0.34	mg/Kg wet	1.67		66.8	40-140			
Pentachloronitrobenzene	1.29	0.34	mg/Kg wet	1.67		77.2	40-140			
Pentachlorophenol	0.791	0.34	mg/Kg wet	1.67		47.4	30-130			V-05
Phenanthrene	1.24	0.17	mg/Kg wet	1.67		74.4	40-140			
Phenol	1.22	0.34	mg/Kg wet	1.67		73.1	30-130			
Pyrene	1.21	0.17	mg/Kg wet	1.67		72.7	40-140			
Pyridine	0.632	0.34	mg/Kg wet	1.67		37.9	30-140			†
4,5-Tetrachlorobenzene	1.04	0.34	mg/Kg wet	1.67		62.5	40-140			
2,4-Trichlorobenzene	1.03	0.34	mg/Kg wet	1.67		61.9	40-140			
2,4,5-Trichlorophenol	1.26	0.34	mg/Kg wet	1.67		75.6	30-130			
2,4,6-Trichlorophenol	1.17	0.34	mg/Kg wet	1.67		70.3	30-130			

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B246869 - SW-846 3546</b>										
<b>LCS (B246869-BS1)</b>										
				Prepared: 11/24/19 Analyzed: 11/27/19						
Surrogate: 2-Fluorophenol	4.87		mg/Kg wet	6.67		73.1	30-130			
Surrogate: Phenol-d6	5.00		mg/Kg wet	6.67		75.1	30-130			
Surrogate: Nitrobenzene-d5	2.33		mg/Kg wet	3.33		69.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.47		mg/Kg wet	3.33		74.0	30-130			
Surrogate: 2,4,6-Tribromophenol	6.16		mg/Kg wet	6.67		92.4	30-130			
Surrogate: p-Terphenyl-d14	2.80		mg/Kg wet	3.33		83.9	30-130			
<b>LCS Dup (B246869-BSD1)</b>										
				Prepared: 11/24/19 Analyzed: 11/27/19						
Acenaphthene	1.14	0.17	mg/Kg wet	1.67		68.5	40-140	4.26	30	
Acenaphthylene	1.19	0.17	mg/Kg wet	1.67		71.6	40-140	2.26	30	
Acetophenone	1.22	0.34	mg/Kg wet	1.67		73.4	40-140	9.71	30	
Aniline	0.956	0.34	mg/Kg wet	1.67		57.4	10-140	16.7	50	† ‡
Anthracene	1.29	0.17	mg/Kg wet	1.67		77.3	40-140	2.97	30	
Benzidine	1.92	0.66	mg/Kg wet	1.67		115	40-140	4.03	30	V-04, V-05, V-35
Benzo(a)anthracene	1.24	0.17	mg/Kg wet	1.67		74.3	40-140	2.87	30	
Benzo(a)pyrene	1.21	0.17	mg/Kg wet	1.67		72.6	40-140	3.33	30	
Benzo(b)fluoranthene	1.29	0.17	mg/Kg wet	1.67		77.4	40-140	8.54	30	
Benzo(g,h,i)perylene	1.33	0.17	mg/Kg wet	1.67		79.8	40-140	14.7	30	
Benzo(k)fluoranthene	1.30	0.17	mg/Kg wet	1.67		78.1	40-140	7.69	30	
Benzoic Acid	0.168	1.0	mg/Kg wet	1.67		10.1	* 30-130	6.35	50	L-04 ‡
(2-chloroethoxy)methane	1.20	0.34	mg/Kg wet	1.67		72.3	40-140	8.27	30	
Bis(2-chloroethyl)ether	1.16	0.34	mg/Kg wet	1.67		69.7	40-140	11.2	30	
Bis(2-chloroisopropyl)ether	1.26	0.34	mg/Kg wet	1.67		75.4	40-140	10.9	30	
Bis(2-Ethylhexyl)phthalate	1.25	0.34	mg/Kg wet	1.67		75.2	40-140	1.34	30	
4-Bromophenylphenylether	1.26	0.34	mg/Kg wet	1.67		75.7	40-140	7.37	30	
Butylbenzylphthalate	1.26	0.34	mg/Kg wet	1.67		75.8	40-140	2.86	30	
Carbazole	1.22	0.17	mg/Kg wet	1.67		73.4	40-140	1.59	30	
4-Chloroaniline	0.976	0.66	mg/Kg wet	1.67		58.5	10-140	8.81	30	V-34 †
4-Chloro-3-methylphenol	1.17	0.66	mg/Kg wet	1.67		70.1	30-130	5.01	30	
2-Chloronaphthalene	1.07	0.34	mg/Kg wet	1.67		64.0	40-140	7.79	30	
2-Chlorophenol	1.23	0.34	mg/Kg wet	1.67		73.6	30-130	10.3	30	
4-Chlorophenylphenylether	1.16	0.34	mg/Kg wet	1.67		69.5	40-140	0.0576	30	
Chrysene	1.21	0.17	mg/Kg wet	1.67		72.7	40-140	2.08	30	
Dibenz(a,h)anthracene	1.24	0.17	mg/Kg wet	1.67		74.6	40-140	8.55	30	
Dibenzofuran	1.21	0.34	mg/Kg wet	1.67		72.3	40-140	0.777	30	
Di-n-butylphthalate	1.26	0.34	mg/Kg wet	1.67		75.8	40-140	2.13	30	
1,2-Dichlorobenzene	1.14	0.34	mg/Kg wet	1.67		68.3	40-140	11.1	30	
1,3-Dichlorobenzene	1.10	0.34	mg/Kg wet	1.67		66.0	40-140	10.4	30	
1,4-Dichlorobenzene	1.11	0.34	mg/Kg wet	1.67		66.5	40-140	10.8	30	
3,3-Dichlorobenzidine	1.07	0.17	mg/Kg wet	1.67		64.1	20-140	12.1	50	† ‡
2,4-Dichlorophenol	1.17	0.34	mg/Kg wet	1.67		70.3	30-130	3.92	30	
Diethylphthalate	1.15	0.34	mg/Kg wet	1.67		68.8	40-140	1.36	30	
2,4-Dimethylphenol	1.07	0.34	mg/Kg wet	1.67		63.9	30-130	4.94	30	
Dimethylphthalate	1.19	0.34	mg/Kg wet	1.67		71.4	40-140	2.47	30	
4,6-Dinitro-2-methylphenol	1.09	0.34	mg/Kg wet	1.67		65.5	30-130	0.0916	30	
2,4-Dinitrophenol	0.557	0.66	mg/Kg wet	1.67		33.4	30-130	7.71	30	
2,4-Dinitrotoluene	1.25	0.34	mg/Kg wet	1.67		74.8	40-140	4.34	30	
2,6-Dinitrotoluene	1.33	0.34	mg/Kg wet	1.67		79.9	40-140	0.653	30	
1-n-octylphthalate	1.54	0.34	mg/Kg wet	1.67		92.4	40-140	17.6	30	
1,2-Diphenylhydrazine/Azobenzene	1.35	0.34	mg/Kg wet	1.67		80.8	40-140	8.63	30	
Fluoranthene	1.27	0.17	mg/Kg wet	1.67		76.4	40-140	1.85	30	
Fluorene	1.17	0.17	mg/Kg wet	1.67		70.4	40-140	1.91	30	

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246869 - SW-846 3546										
LCS Dup (B246869-BSD1) Prepared: 11/24/19 Analyzed: 11/27/19										
Hexachlorobenzene	1.31	0.34	mg/Kg wet	1.67		78.9	40-140	4.86	30	
Hexachlorobutadiene	1.13	0.34	mg/Kg wet	1.67		67.6	40-140	12.9	30	
Hexachlorocyclopentadiene	0.678	0.34	mg/Kg wet	1.67		40.7	40-140	1.99	30	V-05
Hexachloroethane	1.11	0.34	mg/Kg wet	1.67		66.4	40-140	8.96	30	
Indeno(1,2,3-cd)pyrene	1.37	0.17	mg/Kg wet	1.67		82.0	40-140	9.48	30	
Isophorone	1.24	0.34	mg/Kg wet	1.67		74.7	40-140	6.67	30	
1-Methylnaphthalene	1.05	0.17	mg/Kg wet	1.67		63.0	40-140	4.05	30	
2-Methylnaphthalene	1.27	0.17	mg/Kg wet	1.67		76.0	40-140	4.69	30	
2-Methylphenol	1.17	0.34	mg/Kg wet	1.67		70.1	30-130	7.79	30	
3/4-Methylphenol	1.21	0.34	mg/Kg wet	1.67		72.4	30-130	4.66	30	
Naphthalene	1.19	0.17	mg/Kg wet	1.67		71.4	40-140	8.92	30	
2-Nitroaniline	1.28	0.34	mg/Kg wet	1.67		76.7	40-140	1.50	30	
3-Nitroaniline	1.20	0.34	mg/Kg wet	1.67		72.3	30-140	0.607	30	†
4-Nitroaniline	1.23	0.34	mg/Kg wet	1.67		74.1	40-140	7.19	30	
Nitrobenzene	1.24	0.34	mg/Kg wet	1.67		74.1	40-140	9.29	30	
2-Nitrophenol	1.39	0.34	mg/Kg wet	1.67		83.7	30-130	9.75	30	
4-Nitrophenol	1.26	0.66	mg/Kg wet	1.67		75.8	30-130	9.53	50	‡
N-Nitrosodimethylamine	1.04	0.34	mg/Kg wet	1.67		62.4	40-140	9.71	30	
N-Nitrosodiphenylamine/Diphenylamine	1.36	0.34	mg/Kg wet	1.67		81.4	40-140	6.58	30	
N-Nitrosodi-n-propylamine	1.21	0.34	mg/Kg wet	1.67		72.5	40-140	8.15	30	
1,2,3-Trichloronitrobenzene	1.30	0.34	mg/Kg wet	1.67		78.1	40-140	1.16	30	
1,2,4-Trichlorophenol	0.770	0.34	mg/Kg wet	1.67		46.2	30-130	2.65	30	V-05
Phenanthrene	1.27	0.17	mg/Kg wet	1.67		76.2	40-140	2.39	30	
Phenol	1.32	0.34	mg/Kg wet	1.67		79.1	30-130	7.99	30	
Pyrene	1.25	0.17	mg/Kg wet	1.67		75.2	40-140	3.41	30	
Pyridine	0.687	0.34	mg/Kg wet	1.67		41.2	30-140	8.34	30	†
1,2,4,5-Tetrachlorobenzene	1.20	0.34	mg/Kg wet	1.67		72.2	40-140	14.3	30	
1,2,4-Trichlorobenzene	1.16	0.34	mg/Kg wet	1.67		69.6	40-140	11.8	30	
2,4,5-Trichlorophenol	1.29	0.34	mg/Kg wet	1.67		77.3	30-130	2.12	30	
2,4,6-Trichlorophenol	1.24	0.34	mg/Kg wet	1.67		74.2	30-130	5.43	30	
Surrogate: 2-Fluorophenol	5.38		mg/Kg wet	6.67		80.7	30-130			
Surrogate: Phenol-d6	5.28		mg/Kg wet	6.67		79.3	30-130			
Surrogate: Nitrobenzene-d5	2.52		mg/Kg wet	3.33		75.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.68		mg/Kg wet	3.33		80.6	30-130			
Surrogate: 2,4,6-Tribromophenol	5.69		mg/Kg wet	6.67		85.4	30-130			
Surrogate: p-Terphenyl-d14	2.84		mg/Kg wet	3.33		85.1	30-130			
Matrix Spike (B246869-MS1) Source: 19K1403-02 Prepared: 11/24/19 Analyzed: 11/27/19										
Acenaphthene	1.33	0.21	mg/Kg dry	2.08	ND	64.0	40-140			
Acenaphthylene	1.40	0.21	mg/Kg dry	2.08	ND	67.4	40-140			
Acetophenone	1.46	0.42	mg/Kg dry	2.08	ND	70.2	40-140			
Aniline	0.971	0.42	mg/Kg dry	2.08	ND	46.8	40-140			
Anthracene	1.43	0.21	mg/Kg dry	2.08	ND	68.8	40-140			
Benzidine	0.137	0.82	mg/Kg dry	2.08	ND	6.58	40-140			MS-09, V-04, V-05, V-35
Benzo(a)anthracene	1.41	0.21	mg/Kg dry	2.08	ND	67.7	40-140			
Benzo(a)pyrene	1.30	0.21	mg/Kg dry	2.08	ND	62.7	40-140			
Benzo(b)fluoranthene	1.36	0.21	mg/Kg dry	2.08	ND	65.4	40-140			
Benzo(g,h,i)perylene	1.37	0.21	mg/Kg dry	2.08	ND	66.1	40-140			
Benzo(k)fluoranthene	1.39	0.21	mg/Kg dry	2.08	ND	66.7	40-140			
Benzoic Acid	0.348	1.2	mg/Kg dry	2.08	ND	16.8	40-140			MS-09
Bis(2-chloroethoxy)methane	1.39	0.42	mg/Kg dry	2.08	ND	67.1	40-140			
Bis(2-chloroethyl)ether	1.41	0.42	mg/Kg dry	2.08	ND	67.9	40-140			

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246869 - SW-846 3546										
Matrix Spike (B246869-MS1)										
Source: 19K1403-02 Prepared: 11/24/19 Analyzed: 11/27/19										
Bis(2-chloroisopropyl)ether	1.49	0.42	mg/Kg dry	2.08	ND	71.7	40-140			
Bis(2-Ethylhexyl)phthalate	1.62	0.42	mg/Kg dry	2.08	0.357	60.8	40-140			
4-Bromophenylphenylether	1.40	0.42	mg/Kg dry	2.08	ND	67.2	40-140			
Butylbenzylphthalate	1.47	0.42	mg/Kg dry	2.08	0.283	57.4	40-140			
Carbazole	1.38	0.21	mg/Kg dry	2.08	ND	66.6	40-140			
4-Chloroaniline	0.985	0.82	mg/Kg dry	2.08	ND	47.5	40-140			V-34
4-Chloro-3-methylphenol	1.39	0.82	mg/Kg dry	2.08	ND	66.9	30-130			
2-Chloronaphthalene	1.24	0.42	mg/Kg dry	2.08	ND	59.7	40-140			
2-Chlorophenol	1.43	0.42	mg/Kg dry	2.08	ND	68.7	30-130			
4-Chlorophenylphenylether	1.35	0.42	mg/Kg dry	2.08	ND	65.1	40-140			
Chrysene	1.38	0.21	mg/Kg dry	2.08	ND	66.6	40-140			
Dibenz(a,h)anthracene	1.32	0.21	mg/Kg dry	2.08	ND	63.8	40-140			
Dibenzofuran	1.40	0.42	mg/Kg dry	2.08	ND	67.7	40-140			
Di-n-butylphthalate	1.43	0.42	mg/Kg dry	2.08	ND	68.7	40-140			
1,2-Dichlorobenzene	1.35	0.42	mg/Kg dry	2.08	ND	65.2	40-140			
1,3-Dichlorobenzene	1.31	0.42	mg/Kg dry	2.08	ND	63.2	40-140			
1,4-Dichlorobenzene	1.33	0.42	mg/Kg dry	2.08	ND	64.2	40-140			
3,3-Dichlorobenzidine	0.956	0.21	mg/Kg dry	2.08	ND	46.0	40-140			
2,4-Dichlorophenol	1.25	0.42	mg/Kg dry	2.08	ND	60.0	30-130			
Diethylphthalate	1.32	0.42	mg/Kg dry	2.08	ND	63.6	40-140			
-Dimethylphenol	1.10	0.42	mg/Kg dry	2.08	ND	52.9	30-130			
-methylphthalate	1.38	0.42	mg/Kg dry	2.08	ND	66.4	40-140			
4,6-Dinitro-2-methylphenol	1.44	0.42	mg/Kg dry	2.08	ND	69.4	30-130			
2,4-Dinitrophenol	1.12	0.82	mg/Kg dry	2.08	ND	53.8	30-130			
2,4-Dinitrotoluene	1.45	0.42	mg/Kg dry	2.08	ND	69.8	40-140			
2,6-Dinitrotoluene	1.56	0.42	mg/Kg dry	2.08	ND	75.2	40-140			
Di-n-octylphthalate	1.63	0.42	mg/Kg dry	2.08	ND	78.3	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.49	0.42	mg/Kg dry	2.08	ND	71.8	40-140			
Fluoranthene	1.50	0.21	mg/Kg dry	2.08	0.154	64.6	40-140			
Fluorene	1.38	0.21	mg/Kg dry	2.08	ND	66.2	40-140			
Hexachlorobenzene	1.46	0.42	mg/Kg dry	2.08	ND	70.1	40-140			
Hexachlorobutadiene	1.29	0.42	mg/Kg dry	2.08	ND	62.2	40-140			
Hexachlorocyclopentadiene	0.821	0.42	mg/Kg dry	2.08	ND	39.6	30-130			V-05
Hexachloroethane	1.32	0.42	mg/Kg dry	2.08	ND	63.4	40-140			
Indeno(1,2,3-cd)pyrene	1.45	0.21	mg/Kg dry	2.08	ND	69.6	40-140			
Isophorone	1.46	0.42	mg/Kg dry	2.08	ND	70.2	40-140			
1-Methylnaphthalene	1.24	0.21	mg/Kg dry	2.08	ND	59.9	40-140			
2-Methylnaphthalene	1.51	0.21	mg/Kg dry	2.08	ND	72.5	40-140			
2-Methylphenol	1.31	0.42	mg/Kg dry	2.08	ND	63.0	30-130			
3/4-Methylphenol	1.39	0.42	mg/Kg dry	2.08	ND	67.0	30-130			
Naphthalene	1.41	0.21	mg/Kg dry	2.08	ND	68.0	40-140			
2-Nitroaniline	1.49	0.42	mg/Kg dry	2.08	ND	71.8	40-140			
3-Nitroaniline	1.29	0.42	mg/Kg dry	2.08	ND	62.3	40-140			
4-Nitroaniline	1.33	0.42	mg/Kg dry	2.08	ND	63.8	40-140			
Nitrobenzene	1.46	0.42	mg/Kg dry	2.08	ND	70.3	40-140			
2-Nitrophenol	1.60	0.42	mg/Kg dry	2.08	ND	77.3	30-130			
4-Nitrophenol	1.43	0.82	mg/Kg dry	2.08	ND	69.1	30-130			
N-Nitrosodimethylamine	1.24	0.42	mg/Kg dry	2.08	ND	59.7	40-140			
Nitrosodiphenylamine/Diphenylamine	1.48	0.42	mg/Kg dry	2.08	ND	71.2	40-140			
Nitrosodi-n-propylamine	1.45	0.42	mg/Kg dry	2.08	ND	70.0	40-140			
Pentachloronitrobenzene	1.49	0.42	mg/Kg dry	2.08	ND	71.5	40-140			
Pentachlorophenol	0.885	0.42	mg/Kg dry	2.08	ND	42.6	30-130			V-05



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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B246869 - SW-846 3546</b>										
<b>Matrix Spike (B246869-MS1)</b>										
<b>Source: 19K1403-02</b>			Prepared: 11/24/19 Analyzed: 11/27/19							
Phenanthrene	1.46	0.21	mg/Kg dry	2.08	ND	70.4	40-140			
Phenol	1.53	0.42	mg/Kg dry	2.08	ND	73.6	30-130			
Pyrene	1.53	0.21	mg/Kg dry	2.08	0.176	65.1	40-140			
Pyridine	0.782	0.42	mg/Kg dry	2.08	ND	37.7 *	40-140			MS-09
1,2,4,5-Tetrachlorobenzene	1.37	0.42	mg/Kg dry	2.08	ND	63.8	40-140			
1,2,4-Trichlorobenzene	1.34	0.42	mg/Kg dry	2.08	ND	64.6	40-140			
2,4,5-Trichlorophenol	1.43	0.42	mg/Kg dry	2.08	ND	68.9	30-130			
2,4,6-Trichlorophenol	1.38	0.42	mg/Kg dry	2.08	ND	66.3	30-130			
Surrogate: 2-Fluorophenol	6.11		mg/Kg dry	8.30		73.6	30-130			
Surrogate: Phenol-d6	6.26		mg/Kg dry	8.30		75.3	30-130			
Surrogate: Nitrobenzene-d5	2.97		mg/Kg dry	4.15		71.4	30-130			
Surrogate: 2-Fluorobiphenyl	3.09		mg/Kg dry	4.15		74.4	30-130			
Surrogate: 2,4,6-Tribromophenol	6.31		mg/Kg dry	8.30		76.0	30-130			
Surrogate: p-Terphenyl-d14	3.30		mg/Kg dry	4.15		79.4	30-130			
<b>Matrix Spike Dup (B246869-MSD1)</b>										
<b>Source: 19K1403-02</b>			Prepared: 11/24/19 Analyzed: 11/27/19							
Acenaphthene	1.36	0.21	mg/Kg dry	2.08	ND	65.6	40-140	2.41	30	
Acenaphthylene	1.44	0.21	mg/Kg dry	2.08	ND	69.3	40-140	2.72	30	
Acetophenone	1.46	0.42	mg/Kg dry	2.08	ND	70.3	40-140	0.114	30	
Aniline	0.849	0.42	mg/Kg dry	2.08	ND	40.9	40-140	13.4	30	
Anthracene	1.48	0.21	mg/Kg dry	2.08	ND	71.2	40-140	3.40	30	
Benzenidine	0.0855	0.82	mg/Kg dry	2.08	ND	4.12 *	40-140		30	V-35, MS-09, V-04, V-05
Benzo(a)anthracene	1.47	0.21	mg/Kg dry	2.08	ND	70.6	40-140	4.28	30	
Benzo(a)pyrene	1.40	0.21	mg/Kg dry	2.08	ND	67.2	40-140	6.89	30	
Benzo(b)fluoranthene	1.40	0.21	mg/Kg dry	2.08	ND	67.3	40-140	2.92	30	
Benzo(g,h,i)perylene	1.55	0.21	mg/Kg dry	2.08	ND	74.8	40-140	12.3	30	
Benzo(k)fluoranthene	1.39	0.21	mg/Kg dry	2.08	ND	67.1	40-140	0.538	30	
Benzoic Acid	0.414	1.2	mg/Kg dry	2.08	ND	19.9 *	40-140		30	MS-09
Bis(2-chloroethoxy)methane	1.44	0.42	mg/Kg dry	2.08	ND	69.1	40-140	2.97	30	
Bis(2-chloroethyl)ether	1.41	0.42	mg/Kg dry	2.08	ND	67.8	40-140	0.265	30	
Bis(2-chloroisopropyl)ether	1.51	0.42	mg/Kg dry	2.08	ND	72.6	40-140	1.22	30	
Bis(2-Ethylhexyl)phthalate	1.74	0.42	mg/Kg dry	2.08	0.357	66.6	40-140	7.19	30	
4-Bromophenylphenylether	1.40	0.42	mg/Kg dry	2.08	ND	67.7	40-140	0.623	30	
Butylbenzylphthalate	1.54	0.42	mg/Kg dry	2.08	0.283	60.7	40-140	4.49	30	
Carbazole	1.41	0.21	mg/Kg dry	2.08	ND	68.1	40-140	2.17	30	
4-Chloroaniline	0.922	0.82	mg/Kg dry	2.08	ND	44.4	40-140	6.62	30	V-34
4-Chloro-3-methylphenol	1.41	0.82	mg/Kg dry	2.08	ND	67.7	30-130	1.28	30	
2-Chloronaphthalene	1.26	0.42	mg/Kg dry	2.08	ND	60.8	40-140	1.86	30	
2-Chlorophenol	1.43	0.42	mg/Kg dry	2.08	ND	69.0	30-130	0.494	30	
4-Chlorophenylphenylether	1.37	0.42	mg/Kg dry	2.08	ND	66.0	40-140	1.37	30	
Chrysene	1.44	0.21	mg/Kg dry	2.08	ND	69.5	40-140	4.17	30	
Dibenz(a,h)anthracene	1.42	0.21	mg/Kg dry	2.08	ND	68.4	40-140	7.05	30	
Dibenzofuran	1.44	0.42	mg/Kg dry	2.08	ND	69.2	40-140	2.28	30	
Di-n-butylphthalate	1.46	0.42	mg/Kg dry	2.08	ND	70.3	40-140	2.22	30	
1,2-Dichlorobenzene	1.36	0.42	mg/Kg dry	2.08	ND	65.6	40-140	0.520	30	
1,3-Dichlorobenzene	1.31	0.42	mg/Kg dry	2.08	ND	63.3	40-140	0.0633	30	
1,4-Dichlorobenzene	1.33	0.42	mg/Kg dry	2.08	ND	63.9	40-140	0.437	30	
1,3-Dichlorobenzidine	0.882	0.21	mg/Kg dry	2.08	ND	42.5	40-140	8.09	30	
1,4-Dichlorobenzidine	1.28	0.42	mg/Kg dry	2.08	ND	61.5	30-130	2.40	30	
Diethylphthalate	1.36	0.42	mg/Kg dry	2.08	ND	65.6	40-140	3.13	30	
2,4-Dimethylphenol	1.12	0.42	mg/Kg dry	2.08	ND	54.1	30-130	2.24	30	
Dimethylphthalate	1.39	0.42	mg/Kg dry	2.08	ND	67.2	40-140	1.23	30	

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246869 - SW-846 3546										
Matrix Spike Dup (B246869-MSD1) Source: 19K1403-02 Prepared: 11/24/19 Analyzed: 11/27/19										
4,6-Dinitro-2-methylphenol	1.45	0.42	mg/Kg dry	2.08	ND	69.7	30-130	0.402	30	
2,4-Dinitrophenol	1.12	0.82	mg/Kg dry	2.08	ND	53.9	30-130	0.334	30	
2,4-Dinitrotoluene	1.50	0.42	mg/Kg dry	2.08	ND	72.4	40-140	3.71	30	
2,6-Dinitrotoluene	1.62	0.42	mg/Kg dry	2.08	ND	77.8	40-140	3.45	30	
Di-n-octylphthalate	1.63	0.42	mg/Kg dry	2.08	ND	78.5	40-140	0.255	30	
1,2-Diphenylhydrazine/Azobenzene	1.50	0.42	mg/Kg dry	2.08	ND	72.1	40-140	0.473	30	
Fluoranthene	1.57	0.21	mg/Kg dry	2.08	0.154	68.0	40-140	4.64	30	
Fluorene	1.42	0.21	mg/Kg dry	2.08	ND	68.2	40-140	2.89	30	
Hexachlorobenzene	1.46	0.42	mg/Kg dry	2.08	ND	70.4	40-140	0.370	30	
Hexachlorobutadiene	1.31	0.42	mg/Kg dry	2.08	ND	62.9	40-140	1.12	30	
Hexachlorocyclopentadiene	0.820	0.42	mg/Kg dry	2.08	ND	39.5	30-130	0.202	30	V-05
Hexachloroethane	1.33	0.42	mg/Kg dry	2.08	ND	63.9	40-140	0.880	30	
Indeno(1,2,3-cd)pyrene	1.63	0.21	mg/Kg dry	2.08	ND	78.3	40-140	11.7	30	
Isophorone	1.50	0.42	mg/Kg dry	2.08	ND	72.3	40-140	2.92	30	
1-Methylnaphthalene	1.28	0.21	mg/Kg dry	2.08	ND	61.6	40-140	2.76	30	
2-Methylnaphthalene	1.55	0.21	mg/Kg dry	2.08	ND	74.7	40-140	2.88	30	
2-Methylphenol	1.33	0.42	mg/Kg dry	2.08	ND	64.1	30-130	1.67	30	
3/4-Methylphenol	1.40	0.42	mg/Kg dry	2.08	ND	67.5	30-130	0.654	30	
Naphthalene	1.45	0.21	mg/Kg dry	2.08	ND	69.8	40-140	2.58	30	
2-Nitroaniline	1.53	0.42	mg/Kg dry	2.08	ND	73.6	40-140	2.53	30	
4-Nitroaniline	1.30	0.42	mg/Kg dry	2.08	ND	62.8	40-140	0.831	30	
3-Nitroaniline	1.36	0.42	mg/Kg dry	2.08	ND	65.6	40-140	2.75	30	
Nitrobenzene	1.49	0.42	mg/Kg dry	2.08	ND	71.6	40-140	1.89	30	
2-Nitrophenol	1.65	0.42	mg/Kg dry	2.08	ND	79.5	30-130	2.78	30	
4-Nitrophenol	1.50	0.82	mg/Kg dry	2.08	ND	72.3	30-130	4.53	30	
N-Nitrosodimethylamine	1.27	0.42	mg/Kg dry	2.08	ND	61.0	40-140	2.16	30	
N-Nitrosodiphenylamine/Diphenylamine	1.51	0.42	mg/Kg dry	2.08	ND	72.7	40-140	2.14	30	
N-Nitrosodi-n-propylamine	1.46	0.42	mg/Kg dry	2.08	ND	70.3	40-140	0.542	30	
Pentachloronitrobenzene	1.47	0.42	mg/Kg dry	2.08	ND	71.0	40-140	0.730	30	
Pentachlorophenol	0.876	0.42	mg/Kg dry	2.08	ND	42.2	30-130	0.990	30	V-05
Phenanthrene	1.52	0.21	mg/Kg dry	2.08	ND	73.1	40-140	3.65	30	
Phenol	1.53	0.42	mg/Kg dry	2.08	ND	73.5	30-130	0.163	30	
Pyrene	1.65	0.21	mg/Kg dry	2.08	0.176	70.9	40-140	7.64	30	
Pyridine	0.778	0.42	mg/Kg dry	2.08	ND	37.5	40-140	0.532	30	MS-09
1,2,4,5-Tetrachlorobenzene	1.38	0.42	mg/Kg dry	2.08	ND	66.5	40-140	1.15	30	
1,2,4-Trichlorobenzene	1.37	0.42	mg/Kg dry	2.08	ND	65.9	40-140	1.93	30	
2,4,5-Trichlorophenol	1.45	0.42	mg/Kg dry	2.08	ND	69.7	30-130	1.10	30	
2,4,6-Trichlorophenol	1.39	0.42	mg/Kg dry	2.08	ND	67.0	30-130	0.930	30	
Surrogate: 2-Fluorophenol	6.09		mg/Kg dry	8.30		73.3	30-130			
Surrogate: Phenol-d6	6.22		mg/Kg dry	8.30		74.9	30-130			
Surrogate: Nitrobenzene-d5	3.06		mg/Kg dry	4.15		73.8	30-130			
Surrogate: 2-Fluorobiphenyl	3.13		mg/Kg dry	4.15		75.5	30-130			
Surrogate: 2,4,6-Tribromophenol	6.47		mg/Kg dry	8.30		77.9	30-130			
Surrogate: p-Terphenyl-d14	3.49		mg/Kg dry	4.15		84.0	30-130			

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## QUALITY CONTROL

## Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B247073 - SW-846 7471</b>										
<b>Blank (B247073-BLK1)</b>				Prepared & Analyzed: 11/26/19						
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B247073-BS1)</b>				Prepared & Analyzed: 11/26/19						
Mercury	2.36	0.38	mg/Kg wet	2.93		80.4	71.3-128.7			
<b>LCS Dup (B247073-BSD1)</b>				Prepared & Analyzed: 11/26/19						
Mercury	2.70	0.38	mg/Kg wet	2.93		92.0	71.3-128.7	13.5	20	
<b>Batch B247130 - SW-846 3050B</b>										
<b>Blank (B247130-BLK1)</b>				Prepared: 11/26/19 Analyzed: 11/27/19						
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
<b>LCS (B247130-BS1)</b>				Prepared: 11/26/19 Analyzed: 11/27/19						
Antimony	106	5.0	mg/Kg wet	147		72.0	6.3-208			
Arsenic	129	5.0	mg/Kg wet	143		89.9	82.4-116.8			
Barium	420	5.0	mg/Kg wet	415		101	81.7-118.5			
Beryllium	181	0.50	mg/Kg wet	179		101	82.6-116.8			
Cadmium	56.2	0.50	mg/Kg wet	56.2		100	82.2-117.5			
Chromium	94.8	0.99	mg/Kg wet	101		93.8	82-118.2			
Lead	117	1.5	mg/Kg wet	125		93.9	82.3-117.1			
Nickel	111	0.99	mg/Kg wet	108		103	82.6-117.4			
Selenium	69.4	9.9	mg/Kg wet	77.9		89.1	79.3-120.7			
Silver	36.6	0.99	mg/Kg wet	34.3		107	79.3-120.7			
Thallium	118	5.0	mg/Kg wet	113		105	80.5-119.1			
Vanadium	70.4	2.0	mg/Kg wet	83.7		84.2	78.6-120.8			
Zinc	228	2.0	mg/Kg wet	240		95.1	80.3-119.4			
<b>LCS Dup (B247130-BSD1)</b>				Prepared: 11/26/19 Analyzed: 11/27/19						
Antimony	96.5	4.7	mg/Kg wet	147		65.6	6.3-208	9.27	30	
Arsenic	117	4.7	mg/Kg wet	143		81.8	* 82.4-116.8	9.50	30	L-07
Barium	384	4.7	mg/Kg wet	415		92.5	81.7-118.5	8.86	20	
Beryllium	167	0.47	mg/Kg wet	179		93.4	82.6-116.8	7.87	30	
Cadmium	50.9	0.47	mg/Kg wet	56.2		90.5	82.2-117.5	9.98	20	
Chromium	86.2	0.94	mg/Kg wet	101		85.4	82-118.2	9.41	30	
Lead	106	1.4	mg/Kg wet	125		85.0	82.3-117.1	9.99	30	
Nickel	99.9	0.94	mg/Kg wet	108		92.5	82.6-117.4	10.5	30	
Selenium	64.1	9.4	mg/Kg wet	77.9		82.3	79.3-120.7	7.93	30	
Silver	33.2	0.94	mg/Kg wet	34.3		96.8	79.3-120.7	9.81	30	
Thallium	111	4.7	mg/Kg wet	113		97.9	80.5-119.1	6.69	30	
Vanadium	64.0	1.9	mg/Kg wet	83.7		76.5	* 78.6-120.8	9.56	30	L-07
Zinc	206	1.9	mg/Kg wet	240		85.6	80.3-119.4	10.4	30	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B247130 - SW-846 3050B										
MRL Check (B247130-MRL1)					Prepared: 11/26/19 Analyzed: 11/27/19					
Lead	0.471	0.50	mg/Kg wet	0.500		94.2	80-120			

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**QUALITY CONTROL**

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B246947 - % Solids</b>										
<b>Duplicate (B246947-DUP1)</b>	<b>Source: 19K1403-01</b>		Prepared: 11/25/19 Analyzed: 11/26/19							
% Solids	59.0		% Wt		66.3			11.6	20	
<b>Duplicate (B246947-DUP2)</b>	<b>Source: 19K1403-02</b>		Prepared: 11/25/19 Analyzed: 11/26/19							
% Solids	79.5		% Wt		80.3			1.03	20	
<b>Duplicate (B246947-DUP3)</b>	<b>Source: 19K1403-03</b>		Prepared: 11/25/19 Analyzed: 11/26/19							
% Solids	53.9		% Wt		55.9			3.51	20	
<b>Duplicate (B246947-DUP4)</b>	<b>Source: 19K1403-04</b>		Prepared: 11/25/19 Analyzed: 11/26/19							
% Solids	52.1		% Wt		53.1			1.88	20	
<b>Duplicate (B246947-DUP5)</b>	<b>Source: 19K1403-05</b>		Prepared: 11/25/19 Analyzed: 11/26/19							
% Solids	44.7		% Wt		45.7			2.12	20	
<b>Duplicate (B246947-DUP6)</b>	<b>Source: 19K1403-06</b>		Prepared: 11/25/19 Analyzed: 11/26/19							
% Solids	40.3		% Wt		42.7			5.74	20	

# FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
MS-09	Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-35	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AI,HA,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8270D-E in Soil</b>	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Acetophenone	NY,NH,ME,NC,VA
Aniline	NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzidine	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Benzoic Acid	NY,NH,ME,NC,VA
Bis(2-chlorooctoxy)methane	CT,NY,NH,ME,NC,VA
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA
2-Chloronaphthalene	CT,NY,NH,NC,VA
2-Chlorophenol	CT,NY,NH,ME,NC,VA
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Dibenzofuran	CT,NY,NH,ME,NC,VA
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA
1,2-Dichlorobenzene	NY,NH,ME,NC,VA
1,3-Dichlorobenzene	NY,NH,ME,NC,VA

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D-E in Soil</i>	
1,4-Dichlorobenzene	NY,NH,ME,NC,VA
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA
Diethylphthalate	CT,NY,NH,ME,NC,VA
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA
Dimethylphthalate	CT,NY,NH,ME,NC,VA
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	NY,NH,ME,NC,VA
Hexachlorobenzene	CT,NY,NH,ME,NC,VA
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA
Hexachloroethane	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
Isophorone	CT,NY,NH,ME,NC,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
2-Methylphenol	CT,NY,NH,ME,NC,VA
3/4-Methylphenol	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
2-Nitroaniline	CT,NY,NH,ME,NC,VA
3-Nitroaniline	CT,NY,NH,ME,NC,VA
4-Nitroaniline	CT,NY,NH,ME,NC,VA
Nitrobenzene	CT,NY,NH,ME,NC,VA
2-Nitrophenol	CT,NY,NH,ME,NC,VA
4-Nitrophenol	CT,NY,NH,ME,NC,VA
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA
Pentachloronitrobenzene	NY,NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenol	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
Pyridine	CT,NY,NH,ME,NC,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA
2-Fluorophenol	NC
<i>SW-846 8270D-E in Water</i>	
Acenaphthene	CT,NY,NC,ME,NH,VA



## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D-E in Water</i>	
Acenaphthylene	CT,NY,NC,ME,NH,VA
Acetophenone	NY,NC
Aniline	CT,NY,NC,ME,VA
Anthracene	CT,NY,NC,ME,NH,VA
Benzidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA
Benzoic Acid	NY,NC,ME,NH,VA
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NC,ME,NH,VA
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA
2-Chlorophenol	CT,NY,NC,ME,NH,VA
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA
Chrysene	CT,NY,NC,ME,NH,VA
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA
Dibenzofuran	CT,NY,NC,ME,NH,VA
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA
Diethylphthalate	CT,NY,NC,ME,NH,VA
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA
Dimethylphthalate	CT,NY,NC,ME,NH,VA
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NC
Fluoranthene	CT,NY,NC,ME,NH,VA
Fluorene	NY,NC,ME,NH,VA
Hexachlorobenzene	CT,NY,NC,ME,NH,VA
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA
Hexachloroethane	CT,NY,NC,ME,NH,VA

# CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D-E in Water</i>	
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA
Isophorone	CT,NY,NC,ME,NH,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA
2-Methylphenol	CT,NY,NC,NH,VA
3/4-Methylphenol	CT,NY,NC,NH,VA
Naphthalene	CT,NY,NC,ME,NH,VA
2-Nitroaniline	CT,NY,NC,ME,NH,VA
3-Nitroaniline	CT,NY,NC,ME,NH,VA
4-Nitroaniline	CT,NY,NC,ME,NH,VA
Nitrobenzene	CT,NY,NC,ME,NH,VA
2-Nitrophenol	CT,NY,NC,ME,NH,VA
4-Nitrophenol	CT,NY,NC,ME,NH,VA
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NC,ME,NH,VA
Phenanthrene	CT,NY,NC,ME,NH,VA
Phenol	CT,NY,NC,ME,NH,VA
Pyrene	CT,NY,NC,ME,NH,VA
Pyridine	CT,NY,NC,ME,NH,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA
2-Fluorophenol	NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Public Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020



I Have Not Confirmed Sample Container  
Numbers With Lab Staff Before Relinquishing  
Over Samples \_\_\_\_\_



**con-test®**  
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False  
Statement will be brought to the attention of the Client - State True or False

Client CDW Consultants

Received By SA Date 11/22 Time 1100

How were the samples received? In Cooler T No Cooler \_\_\_\_\_ On Ice T No Ice \_\_\_\_\_  
Direct from Sampling \_\_\_\_\_ Ambient \_\_\_\_\_ Melted Ice \_\_\_\_\_

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 2.1  
By Blank # \_\_\_\_\_ Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? NA Were Samples Tampered with? NA  
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T  
Did COC include all Client T Analysis T Sampler Name T  
pertinent Information? Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? \_\_\_\_\_

Are there Rushes? F Who was notified? \_\_\_\_\_

Are there Short Holds? F Who was notified? \_\_\_\_\_

Is there enough Volume? T

Is there Headspace where applicable? NA MS/MSD? F

Proper Media/Containers Used? FSA-T Is splitting samples required? F

Were trip blanks received? F On COC? F

o all samples have the proper pH? Acid NA Base NA

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb. <u>10</u>
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

#### Unused Media

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Comments:





## **HAZARDOUS MATERIALS SUMMARY REPORT**

**225-227 Beaver Street  
240 Beaver Street  
Waltham, Massachusetts**

**Prepared for:**

**City of Waltham  
119 School Street  
Waltham, MA 02451**

**January 2020**

**CDW Project # 1830.10**



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Figure 1: Site Plan 240 Beaver Street

Figure 2: Site Plan 225-227 Beaver Street

### **Appendices**

Appendix A: Asbestos Laboratory Data Sheets – CDW (2019)

Appendix B: Lead Paint Laboratory Data Sheets – CDW (2019)

Appendix C: ATC - Pre-Demolition/Renovation Asbestos Survey 240 Beaver Street  
Waltham, MA (2016)

Appendix D: ECS – Limited Asbestos and Lead Paint Inspection, Waltham Research Station,  
Main Barn, Calf Barn, and Garage (2009)

Appendix E: UMass Amherst - Waltham Station Lead Paint Sampling – Administration  
Building (2018)



## **1.0 INTRODUCTION**

CDW Consultants, Inc. (CDW) is pleased to present this report summarizing the findings of the suspect asbestos-containing materials (ACM) and lead-based paint (LBP) inspection of both 240 Beaver Street (Parcel #1) and 225-227 Beaver Street (Parcel #2) properties located in Waltham, Massachusetts. In addition, CDW performed a visual inspection of the Site buildings for the presence of other types of oil and/or hazardous materials, residues and containerized waste.

CDW initially reviewed existing documents summarizing prior building hazardous materials survey of all structures on both properties and performed visual assessment to confirm current conditions and quantities of confirmed ACM, LPB, and other hazardous materials and/or containerized wastes.

CDW reviewed the following reports:

- "Pre-Demolition/Renovation Asbestos Survey 240 Beaver Street, Waltham, MA prepared by ATC Group Services in November of 2016 to confirm the presence of previously documented ACM.
- Limited Asbestos and Lead Paint Inspection, Waltham Research Station, Main Barn, Calf Barn, and Garage (2009).
- "Waltham Station-Lead Paint Sampling" (Lead Analysis Results Table) completed by University of Massachusetts Amherst Environmental Health and Safety Department in January of 2018. The report summarizes the results of lead determination sampling completed throughout the Administration Building via X-Ray Fluorescent (XRF) analysis.
- "Waltham Experiment Station" prepared by University of Massachusetts Amherst employees in January 2010 to confirm building materials and square footage of structures presently in a collapsed or deteriorated state.

The afore mentioned documents were used to identify, clarify or confirm the presence of ACM and LBP in building materials during the on-site assessment by CDW in November 2019 and January 2020.

## **1.0 GENERAL SITE DESCRIPTION**

### **2.1 240 Beaver Street Waltham, MA (Parcel 1)**

The Parcel 1 section of the property consists of an Administration Building, Grey Workshop Building, Boiler House, Corn Laboratory, Greenhouses, a research area, small community garden plots, and agricultural fields. This parcel is bordered by Beaver Street to the north, a baseball field and Waverly Oaks road to the east and southeast, Marianne Road to the south, and Linden Street Residential Properties at Linen Circle and Floral Circle to the west.

Both the administration building (office space) and several of the functioning greenhouses are occupied by Waltham Fields Community Farm. The UMASS maintenance department also occupies an office in the administration building and uses the basement area of the Gray Building as a workshop and small repairs.





The Parcel is accessible from Beaver Street via three gravel driveways which provide access to parking along the east, west, and south side of the Administration Building and the eastern side of the Gray Workshop Building.

#### **ADMINISTRATION BUILDING**

The Administration Building is located closest to Beaver Street. The administration Building is a three-story structure and consists of approximately 15,000 gross square feet of finished space. The structure is constructed of a brick and concrete shell with a tar and gravel style roof. The interior finishes consist of masonry concrete block exterior walls and plaster interior walls and ceilings. Vinyl composite floor tile in varying sizes covers the floor on the 1<sup>st</sup> and 2<sup>nd</sup> levels with a painted concrete floor throughout the ground level. This includes the auditorium area which makes up approximately 5,000 square feet and is currently used as storage by the Waltham Fields group. Within the auditorium area is the large duct system which connects to other sections of the building. The building is heated by steam which originates at the natural gas-powered Boiler House and is piped into the building via a tunnel system.

#### **GRAY BUILDING**

The Gray Building is located approximately 100 feet to the east of the administration building closest to Beaver Street. The Gray Building is a two-story structure measuring approximately 3,100 square feet of finished space. The exterior is wood shingled with an asphalt shingled roof. The interior has several varieties of vinyl composite floor tiling, mudded plaster walls and ceilings, wooden doors, door frames, moldings and window casings throughout. The Workshop/Basement area can be accessed by an overhead garage door on the east side. This workshop area serves as maintenance facility for equipment and small engine repairs for the University of Massachusetts Amherst Maintenance staff. It has a concrete floor with drainage and painted CMU block walls. The upper levels have been used mostly as laboratory space for analyzing soils, photography, etc. The state of the building prevented any further investigation of the roof as several areas have been weather or water damaged and is visually evident amongst the upper levels.

#### **BOILER HOUSE**

This approximate 800 square foot building is constructed of concrete and brick veneer. The Boiler House is home to the Natural Gas fired boilers which serve as the heat source for all the buildings on Parcel 1. This boiler produces steam heat which is channeled underground throughout the system via a main steam line connected directly to the Gray Building. The Boiler House also has an attached incinerator room located on the ground level which is connected directly to the chimney (smokestack).

The steam is then forced from the Gray Building and split through the tunnel system between the Greenhouses on to the Corn Lab. The Main Administration Building is serviced by its own dedicated steam pipe which is tunneled directly into the building from the Boiler House.

In the Boiler House, asbestos containing materials have been identified in previous sampling events, both within the chimney/smokestack and the associated breaching (incinerator to chimney) in the form of rope gasket. The chimney itself and associated venting was inaccessible for visual inspection. CDW was not able to ascertain the location of subsurface steam pipes but assumes that any subsurface steam pipes are asbestos wrapped.



CDW did not collect any samples for the presence of ACM in the Boiler Room and used data from previous inspections and sampling events to re-confirm any known or suspected ACM.

### **CORN LAB**

Located to the east of the Gray Building, the Corn Laboratory is a one-story brick building measuring approximately 1,700 square feet. It has two (2) Greenhouses (Identified as Greenhouses 5A and 5B) attached to the main Brick Building which was used as an office and laboratory.

Greenhouse 5A is connected to the Corn Lab Building at the first floor and is constructed from a wood purlin framing system. The frame for this structure shows signs of failure that include cracked and sagging wood and rusted and sagging metal supports. Greenhouse 5B is connected to the Corn Lab Building at the basement level with the structure below grade. The roof is a modified glazing system with some wood showing signs of deterioration.

At the time of inspection, the Corn Lab and associated Greenhouses were surrounded by a chain link fence. Due to the deteriorated state of the structure it was determined that it was unsafe to enter the main building or the attached greenhouses. As a result, CDW personnel only performed a visual assessment from the outside and did not collect any samples for ACM or LBP during the hazardous materials survey.

## **2.2 225-227 Beaver Street (Parcel 2)**

Parcel 2 (225-227 Beaver Street) is located on the northern side of Beaver Street and is also referred to as the "Northern Parcel". The property consists 58.74 acres of land and was transferred to the Commonwealth of Massachusetts in March of 1923. From that time, these properties comprise the University of Massachusetts Agricultural College Experiment Station. The parcel is bordered by the Fernald State School property to the north and by Waverly Oaks Road and Beaver Street to the south. Camp Cedar Hill lies to the west, with Waverly Oaks Road to the east.

The access to the property is via a gravel drive with an entrance on Beaver Street. The drive borders Camp Cedar Hill to the West and gradually rises in elevation to meet the group of structures. This area of the property consists of abandoned dairy farm buildings including a Farmhouse (former residence), Main Barn, Calf Barn, an associated garage and foundation structures for former buildings.

These structures are in disrepair and several have completely collapsed. The upland field west of the wetland was used for hay production and grazing. From aerial photographs of the area, the wet meadow and wetland areas were never developed.



### **FARMHOUSE**

The Farmhouse is a two-story, duplex style, wood framed house with wood shingle siding and asphalt tile roof. The structure consists of approximately 5,856 sq./ft of finished space. Each side of the house includes a basement, 1<sup>st</sup> floor, 2<sup>nd</sup> floor and an attic. Hardwood floors run throughout with exception of the kitchen and bathrooms. The kitchen contains a 9" x 9" beige w/grey vinyl floor tile (w/associated mastic), with the bathrooms having a 12 x 12 tan w/pattern vinyl tile. Walls consist of a horse-hair type decorative plaster (some covered by particle board paneling), with wood molding/door frames. The ceilings are wire-mesh/plaster, excluding the 2<sup>nd</sup> Floor bathrooms which are comprised of a white cellulose tile.

The house is split down the middle by a shared brick wall and attached chimneys which run from the basement level to the roof. Each basement (2) has a cement floor and 3 walls made of block/cement with the fourth being the shared brick. During the assessment two (2) 275-gallon heating oil tanks were discovered (one in each side), it is estimated that they together contain approximately 50 total gallons of petroleum. Several water-heater tanks and HVAC system components were discovered in both sides of the basement during the time of inspection. Mold was present throughout the 2<sup>nd</sup> floor of the farmhouse, possibly due to water damage from a leak in the roof and damaged skylights.

### **MAIN BARN**

From the visible material within the approximate 3,000 sq./ft footprint area of the collapsed structure it is assumed that the stable style building was constructed of wooden post and beam with panel siding and an asphalt shingle roof. The area surrounding the Main Barn was secured with a locked chain link fence due to the collapse of the building. The building appeared unsafe at the time of the site visit. No entry was made beyond the fence line. No oil or hazardous materials storage containers were observed through the fence. In previously published documentation, ACM was confirmed within the structure in the form of transite paneling and asphalt roofing shingles; however, no quantity had been established.

### **CALF BARN**

The Calf Barn is a one-story wood-built structure with a loft and a transite shingle roof. The structure is collapsed and inaccessible due to a chain link fence. From a visual assessment the "Calf Barn" is an approximate 2,000 sq./ft building space, constructed of wooden post and beam with wooden panels and a gray square transite tile roof. CDW collected a sample of the corrugated roof tile which was stored inside the Calf Barn and which did not appear to be sampled during previous events.

### **GARAGE**

The Garage structure is an approximately 700 sq./ft building located to the northeast of the Farmhouse. It is constructed on a concrete slab and consists of wooden post and beam with wood panel siding, an asphalt shingle roof and associated vapor barrier paper. During the assessment it was observed that the roof is mostly collapsed and it is surrounded by a chain link fence. It was observed from the exterior that a significant size pile of used rubber tires, small piles of stored/unused asphalt shingles and miscellaneous building materials including scrap metals were stored and left behind within the building and will need to be disposed of.



### **3.0 ASBESTOS SURVEY**

#### **3.1 Methods**

The USEPA and Massachusetts Department of Environmental Protection (MassDEP) are responsible for developing and enforcing regulations necessary to protect the general public from airborne contaminants that are known to be hazardous to human health. They regulate ACM associated with renovation, demolition, and asbestos abatement projects via the National Emissions Standard for Hazardous Air Pollutants (NESHAP) Title 40 CFR Part 61 regulation. These regulations require that buildings be inspected for ACM prior to renovation/demolition projects. They stipulate that all friable ACM as well as non-friable ACM that are in poor condition or will be made friable by renovation or demolition activity be removed or otherwise appropriately abated before they are disturbed.

In November 2019, Mr. Alan Sundquist (Massachusetts DLS Inspector #AI900788) conducted an inspection for suspect ACM. An inspection is required by the United States Environmental Protection Agency (USEPA) National Emission Standards for Hazardous Air Pollutants (NESHAP), prior to scheduled building renovations. Samples of suspect materials were collected to confirm the presence or absence of ACM. Suspect materials were grouped into homogenous areas. A homogenous area is an area that is similar in color, texture and date of application. Hand tools were used to collect bulk samples which were promptly placed in sealed plastic bags using a unique numbering system. Samples were not collected of non-suspect materials, including wood, fiberglass, plastic/vinyl, ceramic, concrete, neoprene/rubber, glass, and carpeting.

The investigative work for the asbestos survey included conducting a visual inspection of physically accessible areas of the structure, reviewing plans and observe any vapor barriers, as well as the roof for suspect materials. Once the inspection was completed, the building components were categorized into homogeneous areas. These homogeneous areas included: surfacing materials, thermal system insulation, and miscellaneous materials. CDW collected bulk samples of different homogeneous suspect materials for asbestos analysis. The bulk samples were delivered under chain of custody to Asbestos Identification Laboratory, Inc. (AIL) of Woburn, Massachusetts, fully accredited asbestos analytical laboratories, analyzed the bulk samples utilizing Polarized Light Microscopy (PLM) in accordance with the requirements of 40 CFR Part 763, Subpart F. Samples analyzed to contain greater than 1% asbestos are to be treated as ACM as defined by the USEPA and MassDEP. A positive stop method was used – if one sample in a homogeneous group is positive then additional samples of the same material are not analyzed. The asbestos analytical reports are provided in Appendix A.

Previous inspection reports, documentation and analytical data were carefully reviewed to determine previously documented suspect and confirmed ACM. On November 20<sup>th</sup>, 2019 Mr. Alan Sundquist (Massachusetts Asbestos Inspector #AI 900788) conducted an onsite inspection for suspect materials.



### 3.2 Findings

CDW compiled the results of the recent field survey as a supplement to the information available from prior investigations.

#### PARCEL #1

Results of the Parcel #1 laboratory sampling performed by CDW are summarized in the next table:

Field ID / Laboratory ID	Description	Location	Result
ADMINISTRATION BUILDING			
1A,1B, 1C	Grey Fire Mortar	Behind Brick Facade- Administration Building	ND
549748, 549749, 549750			
GREY BUILDING			
11A, 11B, 11C	12"x12" White Tile w/Grey	Grey Building-Large Room	ND
538921, 538922, 538923			
12A, 12B, 12C	Tan Mastic	Grey Building- Large Room	ND
583924, 583925, 583926			
13A, 13B, 13C	White Ceiling Plaster	Grey Building-Large Room	ND
538927, 538928, 538929			
14A	9"x9" Maroon/Black Tile	Grey Building- Room 105	ND
538930			
15A	Black Vapor Paper (under 9x9 maroon/black tile)	Grey Building- Room 105	ND
538931			
16A	9"x9" Black Floor Tile	Grey Building-Room 105	ND
538932			
17A	Black Vapor Paper (under 9"x9" black floor tile)	Grey Building- Room 105	ND
538933			

A summary of the **CONFIRMED** positive for ACM findings sampling events performed by ATC (formerly ECS) are presented by building in the tables below:

Material Description	Location	Est. Quantity	Units
<b>ADMINISTRATION BUILDING</b>			
Pipe Fittings and Thermal Surface Insulation	On Steam and Hot Water Lines and Valves Throughout the Administration Building	2,567	LF
Black Soundboard Adhesive	Room 09A (Patch) and Room 202	40	SF



Brown Stick Pin Adhesive on Metal Ductwork	Auditorium, Room 019	200	SF
Residual Black Mastic	Room 03 Administration Building	100	EA
Residual Acoustical Ceiling Plaster (Blue and White) -- Left after Abatement was Completed	Room 019 Perimeter	10	LF
Gray with specks 9" x 9" Floor Tile and Associated Mastic	Room(s) 10, 12, 16, 101, 104, 119, 207, 207, 206, 212, 213,214	2,325	SF
Cream with Gray and Black Specks 12 x 12 Floor Tile and Associated Mastic	Hallway 099E and Room 19	3,548	SF
Brown 9" x 9" Floor Tile and Associated Mastic	Room 09 and 09A	200	SF
Brown 12" 12" Floor Tile and Associated Mastic	Hallway 099C and Hallway 099D	128	SF
Black with White Specks 12' x 12" Floor Tile and Associated Mastic	Hallway 199B	340	SF
Brown 9" x 9" Floor Tile and Associated Mastic	Room 102, 105, 108, 108A, 110, 112, 112A, 117, 118, 120, 121, 122, 124, Hallway 199D, 201, 202, 203, 204, 209, 210 Hallway 299B and 299C	3,911	SF
9"x 9" Floor Tiles and associated Mastic	Throughout, Halls Outside Auditorium and select offices on all levels	108,000	SF
Exterior Window Caulk	At Sides of Long Window Banks, Between Bank and Brick	115	LF
Exterior Window Glaze	Interior of Exterior Window Banks Throughout	115	EA
Square Pattern Linoleum on Counter	Room 101	30	LF
Transite Counter Tops, Sink Counter Tops and Stored Transite	Room 11, 214, 109 205	90	SF

SF=Square Feet LF =Linear Feet EA= Each

Material Description	Location	Est. Quantity	Units
<b>GRAY BUILDING</b>			
Gray with white Specks 9"x9" Floor Tile Associated Vapor Barrier and Associated Mastic	Room 105,202, 202A, 203, 203A, 204, 204A, 221, 221A, 1 <sup>st</sup> Floor Hallway, 1st Floor Bathroom, 1st Floor Storage, 2 <sup>nd</sup> Floor Hall, Small Room 2nd Floor Hallway	2,285	SF



Green/Blue Transite Boards	Room 105, 201, 203, 204 Basement Stairs to Sub-Basement	91	SF
Fume Hood Counter	Room 204	10	SF
Laboratory/Sink Countertops	1 <sup>st</sup> Floor Large Room, Room 201, 204	27	SF
White Sink Undercoating	Room 105	10	EA
Thermal Systems Insulation	Sub-Basement Pipe Chase into Greenhouse	~ 200	LF
Window Glazing Compound	Throughout	60	EA
Window Casing Caulking	Garage Exterior	6	EA
Black with White Streaks Countertop Sheet Goods	Room 105, Room 204	50	SF
(!)Decorative Plaster Skim	1 <sup>st</sup> Floor Large, Storage Room, Room 203,204	1,200	SF
(!)Cementous Coating Over Cork	Sub-Basement Cooler	550	SF
Brown Faux Tile Adhesive Behind Splash Guard	Basement	10	SF

SF=Square Feet LF =Linear Feet EA= Each (!)=Lab Data Indicates <1% Asbestos

Material Description	Location	Est. Quantity	Units
<b>GREENHOUSES</b>			
Thermal Systems Insulation	(Trenches)Greenhouse 3, 4, 5A, 5B, 6, 7, 8, 14	340	LF
Corrugated Transite Wall Panel Including Green/Blue Transite Board	Greenhouse 2, 9, 10, 11, 13	659	SF
Window Glazing Compound	Greenhouse 1-15	16,000	SF
Caulking	Between Small Shed and Greenhouse	100	SF
Black Panel Adhesive	Greenhouse 6	110	SF
Yellow Foam Insulation Adhesive	Greenhouse 13, 14, 15	460	SF
Sink Undercoat	Exterior Between Greenhouse 8 and 15	5	SF

SF=Square Feet LF =Linear Feet EA= Each



Material Description	Location	Est. Quantity	Units
<b>CORN LAB</b>			
Gray with White Streaks 9" x 9" Floor Tile and Associated Mastic	Main Room, Entry and Bathroom	270	SF
(?) Stored Transite Board (Presumed)	Basement	2	SF
(?) Stored Corrugated Transite Panels	Exterior of Greenhouse	30	SF
Door Casing Caulking	Front Door and Door Leading to Greenhouse	2	EA
Gray Sink Undercoating	Main Room	1	EA
(?) Window Glazing Compound	Corn Lab Greenhouse	760	LF

SF=Square Feet LF=Linear Feet EA= Each (?)= Presumed to be Asbestos Containing

Material Description	Location	Est. Quantity	Units
<b>PESTICIDE SHED</b>			
Window Glazing Compound	Throughout	546	LF

LF=Linear Feet

Material Description	Location	Est. Quantity	Units
<b>BOILER HOUSE</b>			
Door Casing Caulking	Throughout	2	EA
Exterior Window Casing and Glazing Compound	Throughout	7	EA
TSI Roping around Metal Breeching (Smokestack Exterior)	Exterior of Building	20	LF
Gaskets Associated with Steel Boiler Breeching	Boiler Room	50	LF
Insulation between steel walls of incinerator and suspect components	Incinerator Room	190	SF
(?) Stored Boxes of Floor Tiles	Sub-Basement Pipe Chase into Greenhouse	2	Boxes

SF=Square Feet LF=Linear Feet EA= Each (?)= Presumed to be Asbestos Containing





## PARCEL #2

Results of the Parcel #2 laboratory sampling performed by CDW are summarized in the below table:

Field ID / Laboratory ID	Description	Location	Result
<b>FARMHOUSE</b>			
1A, 1B, 1C 538895, 538897, 538897	Sheet Rock w/Paint	2 <sup>nd</sup> Floor Left	ND
2A, 2B, 2C 538898, 538899, 538900	9 x 9 Beige w/Grey Floor Tile	Kitchen	ND
3A, 3B, 3C 538901, 539902, 538903	Brown Mastic	Kitchen	ND
4A 538904	Black Paint	Basement Wall	ND
5A, 5B, 5C 538905, 538906, 538907	Ceiling Plaster	1 <sup>st</sup> Floor Bedrooms	ND
6A, 6B, 6C 538908, 538909, 538910	Ceiling Plaster – White	Kitchen	ND
7A, 7B, 7C 538911, 538912, 538913	Ceiling Plaster- Brown	Kitchen	ND
8A, 8B, 8C 538914, 538915, 538916	White Ceiling Tile	2 <sup>nd</sup> Floor Bath	ND
9A 538917	Tan Floor Tile	2 <sup>nd</sup> Floor Bath	ND
<b>CALF BARN</b>			
10A, 10B, 10C 538918, 538919, 538920	Grey Corrugated Roof Tile/Paneling	Calf Barn Roof	<b>Detected Chrysotile 20%</b>

SF= Square feet



The confirmed ACM location and quantity from the survey completed in November 2019 is presented below:

Confirmed ACM Materials			
Material Description	Sample Location	Est. Approximate Quantity	Units
Grey Corrugated Roof Tile/Paneling	Calf Barn (stacked inside)	1,000	SF

SF= Square feet

A summary of the confirmed positive for ACM findings and quantities performed by ATC (formerly ECS) are presented in the below table:

Material Description	Location	Est. Quantity*	Units
<b>FARMHOUSE</b>			
Linoleum Flooring	Pantry/Kitchen Area	1,200	SF
<b>MAIN BARN</b>			
Transite Paneling	Throughout	Unknown	SF
Asphalt Roof Shingles	Exterior of Building	Unknown	SF
<b>CALF BARN</b>			
Square Transite Roof Shingles	Exterior	5,000	SF

\* CDW estimated quantity based on visual assessment and available data

SF= Square feet

Tables including all suspect materials which were analyzed and were found not to contain asbestos can be found within the ATC Inspection report in Appendix C.

### 3.3 Other Observations

Other observations during CDW's survey include:

- Due to the current state of the Main Barn, Calf Barn and the Garage Building it is possible that additional suspect materials may be uncovered throughout the course of performing work or disposal activities.



- No samples of the roof were collected from the administration building due to limited scope therefore it should be assumed ACM until which time definitive sampling can be completed.
- Both the “Waltham Experiment Report” (produced by UMASS in 2010) and the Inspection report published by Environmental Compliance Services (ECS) in 2009 eludes to the confirmed presence of asbestos being found within the Farmhouse in the form of a Linoleum floor. It also mentions ACM containing transite panels and asphalt roof shingles associated with the Main Barn structure, though no quantities were given.
- Since only limited destructive sampling was performed CDW also believes that ACM could also be present in an underlying floor leveler or “Levelastic” which could be present beneath both flooring and mastic within several of the structures.
- CDW was not able to inspect foundation for coating “mastic” due to inaccessibility to the subsurface.
- The brick within the incinerator structure is assumed to be “fire brick” and likely to be ACM. The collected ash residue should also be considered hazardous.

A summary of the assumed positive ACM is presented in the table below:

Material Description (Assumed)	Location	Est. Quantity	Units
Roofing Material	Administration Building	15,000	SF
Incinerator Brick	Boiler House	Unknown	SF
Ash Residue (associated waste from incinerator)	Boiler House (Incinerator)	3	Tons

SF= Square feet

### 3.4 Recommendations

CDW has confirmed the presence or likely presence of ACM within buildings at the Site and has developed preliminary quantities for abatement.

Since many of the structures were collapsed or deemed unsafe to enter during CDW’s time onsite it is recommended that selective demolition and segregation of building materials take place before any type of disposal. Given the state of the structures it is difficult to estimate a quantity of the materials before work to segregate all other building materials takes place.

CDW recommends that a selective demolition and abatement plan or possible “non-traditional workplan” be created for abatement of asbestos. This calculated process would allow for a more efficient disposal process and avoid unnecessary expenses. Such expenses could occur due to the cross contamination of construction waste and subsequent fees associated with disposal. A “non-traditional work plan” would most likely focus on the more deteriorated structures on the property such as the



Greenhouses or Corn Lab Building. Performing work under a MassDEP approved workplan would allow for the segregation of positively identified hazardous materials and allow the possibility to dispose of them separately as an alternative to disposing of the entire structure as hazardous material.

ACM that will be impacted by renovation or demolition work must be removed before they are disturbed. This work must be conducted in accordance with a project design as prepared by a licensed Asbestos Abatement Project Designer. This report is not intended for use as an abatement design. Prior to disturbance, the ACM identified must be abated by a Commonwealth of Massachusetts-licensed asbestos abatement contractor following all federal, state & local regulations governing asbestos abatement. A copy of the Asbestos Waste Shipment record must be received within 30 days of removal from the Site. Asbestos air quality sampling must be conducted under USEPA regulations following asbestos abatement and prior to re-occupancy of the spaces.

During the course of renovation or demolition work, it is possible that additional suspect ACM will be encountered. Contractors should be apprised to conduct any such work in a controlled manner. If suspect materials that have not been sampled are encountered, they should be assumed to contain asbestos, unless appropriate sampling and analysis indicates otherwise.

If any identified ACM will remain in place, then the ACM should be managed under an Operations and Maintenance Plan (O&M Plan) so that they are not inadvertently disturbed. The O&M Plan would include establishing a Program Manager, recordkeeping, employee and contractor notifications, periodic surveillance and training requirements.

#### **4.0 LEAD-BASED PAINT**

##### **4.1 Methods**

CDW performed a visual inspection of painted surfaces. CDW collected samples of paints on various types of building component substrates. Samples were submitted to Pro-Science Laboratories in Woburn, Massachusetts for analysis via atomic absorption spectrometry (AAS). The lead paint analytical reports are provided in Appendix B.

##### **4.2 Findings**

In November 2019, CDW collected select samples of paint to determine the potential presence of lead. The results of the laboratory analysis are provided in the below table:

<b>Sample ID/ Lab ID</b>	<b>Substrate</b>	<b>Location</b>	<b>Lead Concentration (% Weight)</b>
LP-1	Black Paint	Farmhouse Basement Wall	<RL
C 638190			



Sample ID/ Lab ID	Substrate	Location	Lead Concentration (% Weight)
LP-2	White Paint on Molding and Stairs	1 <sup>st</sup> Floor Farmhouse	0.27
C 638191			
LP-3	White Ceiling Paint	Grey Building/Large Room	<RL
C 638192			
LP-4	White Paint on Walls	Grey Building/Large Room	<RL
C 638193			
LP-5	Blue Paint on Walls and Door	Grey Building Room 203	0.32
C 638194			
LP-6	Gray Paint on Door and Molding	Grey Building Room 204	0.26
C 638195			
LP-7	Black Paint on Molding and Stairs	Grey Building 2 <sup>nd</sup> Floor Hallway	0.069
C 638196			

The analytical results from the limited survey conducted by CDW detected concentrations of lead in three (3) of the seven (7) samples collected. The USEPA defines LBP as any paint or surface coating that contains lead equal to exceeding one milligram per square centimeter (1.0 mg/cm<sup>2</sup>) or 0.5% by weight. The OSHA lead-in-construction standard defines lead containing paint (LCP) as a paint or coating containing any detectable level of lead.

A previous Lead-Based Paint sampling event was conducted by ECS on August 10<sup>th</sup>, 2009. This survey took place before some or most of the structures had completely collapsed and therefore were more accessible for collection.

Below are the results from the August 10<sup>th</sup>, 2009 lead paint inspection event:

Sample ID (Lab ID)	Description	Location	Lead Concentration (% Weight)
W-1	White Paint on Wood Trim Around Doors and Windows	Garage	6.84
C 341029			
W-2		Main Barn	25.79



Sample ID (Lab ID)	Description	Location	Lead Concentration (% Weight)
C 341030	White/Tan Large Door Frame Paint		
W-3 C 341031	Green Entrance Door Paint	Main Barn	10.24
W-4 C 341032	Green Window/Door Frame Paint	Calf Barn	23.93
W-5 C 341033	White Interior Window Frame Trim Paint	Calf Barn	0.22
W-6 C 341034	Orange Entrance Door Paint	Calf Barn	0.02
W-7 C 341035	Brown Interior Window Frame Trim Paint	Calf Barn	0.57
W-8 C 341036	White Interior Wall Paint	Calf Barn	32.15
W-9 C 341037	White Trim Paint on Basement Door Frame	Main Barn	36.24
W-10 C 341038	Brown Exterior Siding Shingles	Main Barn	0.07

Six (6) of the ten (10) samples for Lead Based Paint were observed and tested for concentration greater than one milligram per square centimeter (1.0 mg/cm<sup>2</sup>) or 0.5% by weight.

The results of the 2009 Lead Paint survey by ECS can be found in Appendix D. This testing was done via the XRF method which can be known to emit false positives during field testing. CDW would recommend that before any large-scale demolition or construction, any areas above the action level (1.0 mg/cm<sup>2</sup>) be resampled and submitted to a lab for analysis via atomic absorption spectrometry (AAS) method.

#### 4.3 Recommendations

Based on the conclusions of this testing, the following recommendations are offered:

- Removal of the LBP is not required. However, in accordance with the EPA Lead Renovation, Repair, and Painting (RRP) Rule 40 CFR 745, workers, students, visitors and the public must be protected from lead dust generated during the demolition of LBP or LCP coated surfaces.
- Components identified to contain the presence of lead should not be disturbed in an uncontrolled manner. Disturbance of these materials should only be done by properly trained



personnel in a controlled and documented manner to allow for the safety of the workers, bystanders and proper disposal of waste materials.

## 5.0 OTHER HAZARDOUS MATERIALS (OHM) SURVEY

### 5.1 Methods

CDW visually inspected the Site building for universal, special and hazardous wastes associated with building materials. The survey was intended to identify and quantify materials such as: mercury-containing light tubes, PCB-containing light ballasts, mercury containing thermostats and switches, lead and tritium batteries, refrigerants and other hazardous materials. No hazardous materials sampling or analysis was conducted as part of this survey.

### 5.2 Findings

The OHM identified were as follows:

Material Description	Location	Est. Quantity	Units
<b>ADMINISTRATION BUILDING</b>			
Compact Incandescent Bulbs	Throughout	36	EA
Fluorescent Bulbs (Mercury) and LED Bulbs (Arsenic and Lead)	Throughout	357	Bulbs
Electronic Light Ballast	Throughout	159	Each
Thermostats and Switches (Mercury)	Throughout, Mechanical and HVAC	2	Ampules
Emergency Light Batteries (Lead)	Throughout	ND	EA
Fire Extinguishers (Compressed Gas)	Throughout	3	EA
Exit Signs (Tritium)	Throughout	6	EA
Older Door Retractors (Hydraulic Fluid)	Doors	6	EA
Heat Detectors (mercury)	Throughout	ND	EA



Material Description	Location	Est. Quantity	Units
<b>GRAY BUILDING</b>			
Compact Incandescent Bulbs	Throughout	14	EA
Fluorescent Bulbs (Mercury) and LED Bulbs (Arsenic and Lead)	Throughout	109	Bulbs
Electronic Light Ballast	Throughout	55	Each
Thermostats and Switches (Mercury)	Throughout, Mechanical and HVAC	1	Ampules
Emergency Light Batteries (Lead)	Throughout	-	EA
Refrigerants Associated with HVAC	Throughout	-	Gallons
Fire Extinguishers (Compressed Gas)	Throughout	1	EA
Refrigerants Associated with Water Bubblers	Throughout	-	Gallons
Exit Signs (Tritium)	Throughout	-	EA
Heat Detectors (mercury)	Throughout	-	EA
Asbestos Blanket	Throughout	2	EA
<b>BOILER HOUSE</b>			
Ash (associated with incinerator)	Incinerator	3	Tons
<b>FARMHOUSE</b>			
Above Ground Storage Tank	Basement	2	275 Gallons
Heating oil	Basement	50(total)	Gallons

### 5.3 Other Observations

Access was limited in areas and buildings considered unsafe. It is possible that via further inspection of collapsed buildings additional hazardous materials will be discovered.

- During visual inspection within the Gray building CDW came across multiple chemicals that are used during the development process of photos. Since no sampling of this media was performed it should be assumed hazardous until the point when additional sampling can be





performed to determine otherwise. Many of the chemicals used during this process can be harmful and highly toxic via skin contact, inhalation or ingestion.

- Any other miscellaneous materials found stored within the structures should be disposed of as Universal Waste where applicable.

#### **5.4 Recommendations**

The OHM identified were as follows:

Items listed in the OHM table, if no longer in use, should be recycled or disposed of in accordance with state and federal regulations.

#### **6.0 LIMITATIONS**

The conclusions are limited to the information available at the time of the field survey and the scope of services, as defined. No subsurface soil or groundwater sampling and analysis was performed under this task. Where access to portions of the Site or to structures on the site was unavailable or limited, CDW renders no opinion as to the presence of hazardous material or the presence of indirect evidence related to hazardous material in that portion of the site or structure. This report cannot be solely relied upon for renovation or demolition. The sampling performed forms the basis for conclusions expressed and areas inaccessible for testing limits those conclusions. No other conclusions, interpretations or recommendations are contained or implied in this report other than those expressed. While CDW followed industry standards during the inspection, we do not warrant that all suspect hazardous building materials were identified in or on the buildings and shall not be held liable related to future abatement costs related to hazardous materials that are either not discovered or not appropriately characterized. This is due in part to inherent problems with every building inspection, such as, but not limited to:


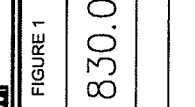
- Seemingly homogeneous materials that are not in fact homogeneous;
- Seemingly representative locations that are not in fact representative;
- Layered materials that are not uniformly present or are isolated;
- Materials that are present and accessible but were not considered to be hazardous,
- Materials that are present in an isolated and limited quantity; and
- Material that is present in locations that are unsafe or otherwise difficult to access.

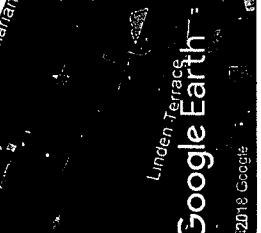
Client acknowledges that CDW's inspection is limited and all hazardous materials may only become apparent during future demolition. Additional hazardous materials or materials suspected of being hazardous should be assumed to be hazardous unless appropriate evaluation or sampling and analysis demonstrate otherwise. No other use of this report is warranted without the written consent of CDW Consultants, Inc.

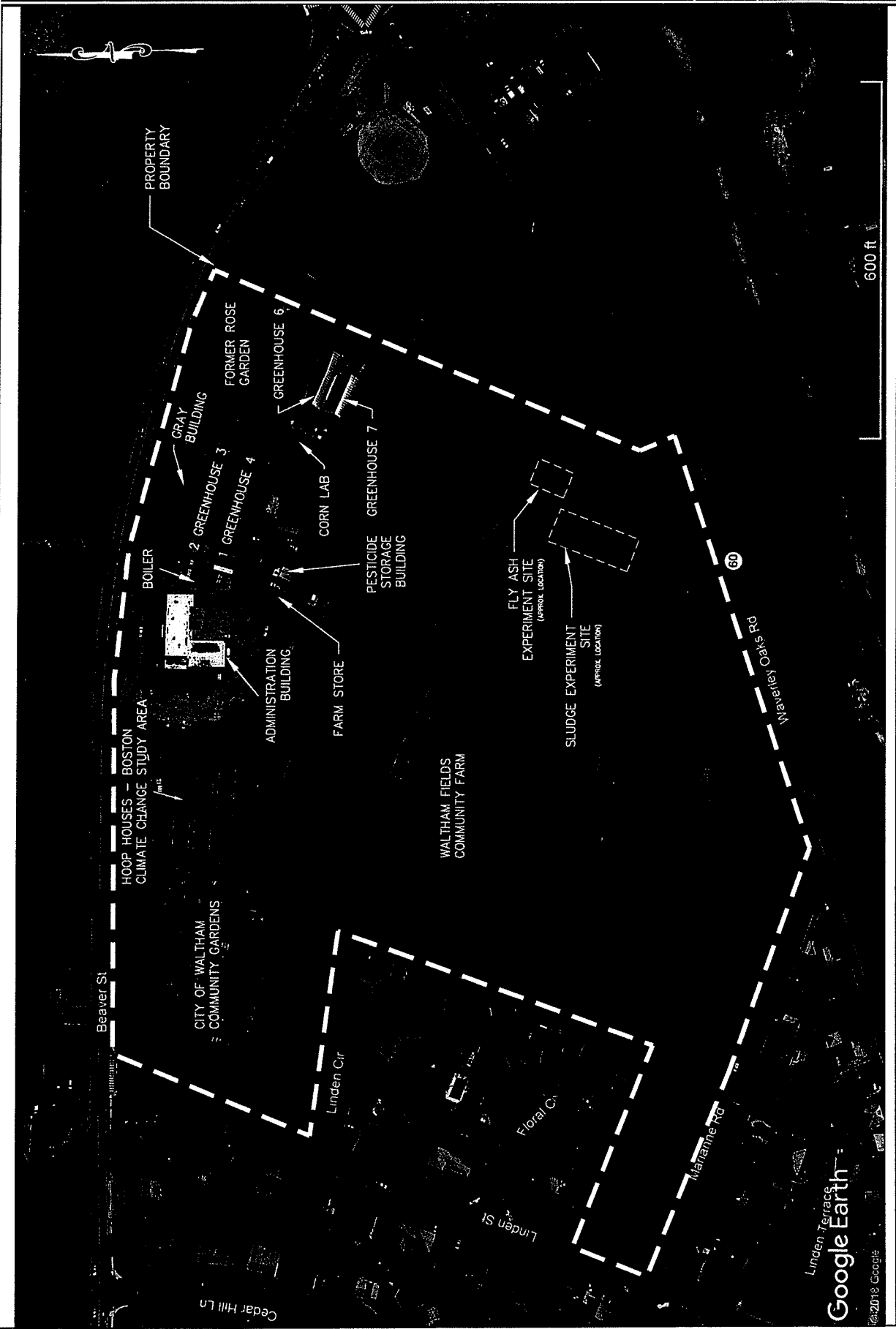
## **FIGURE 1**

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WALTHAM, MA  
 PHASE I SITE ASSESSMENT  
 240 BEAVER STREET  
 SITE PLAN





**FIGURE 2**

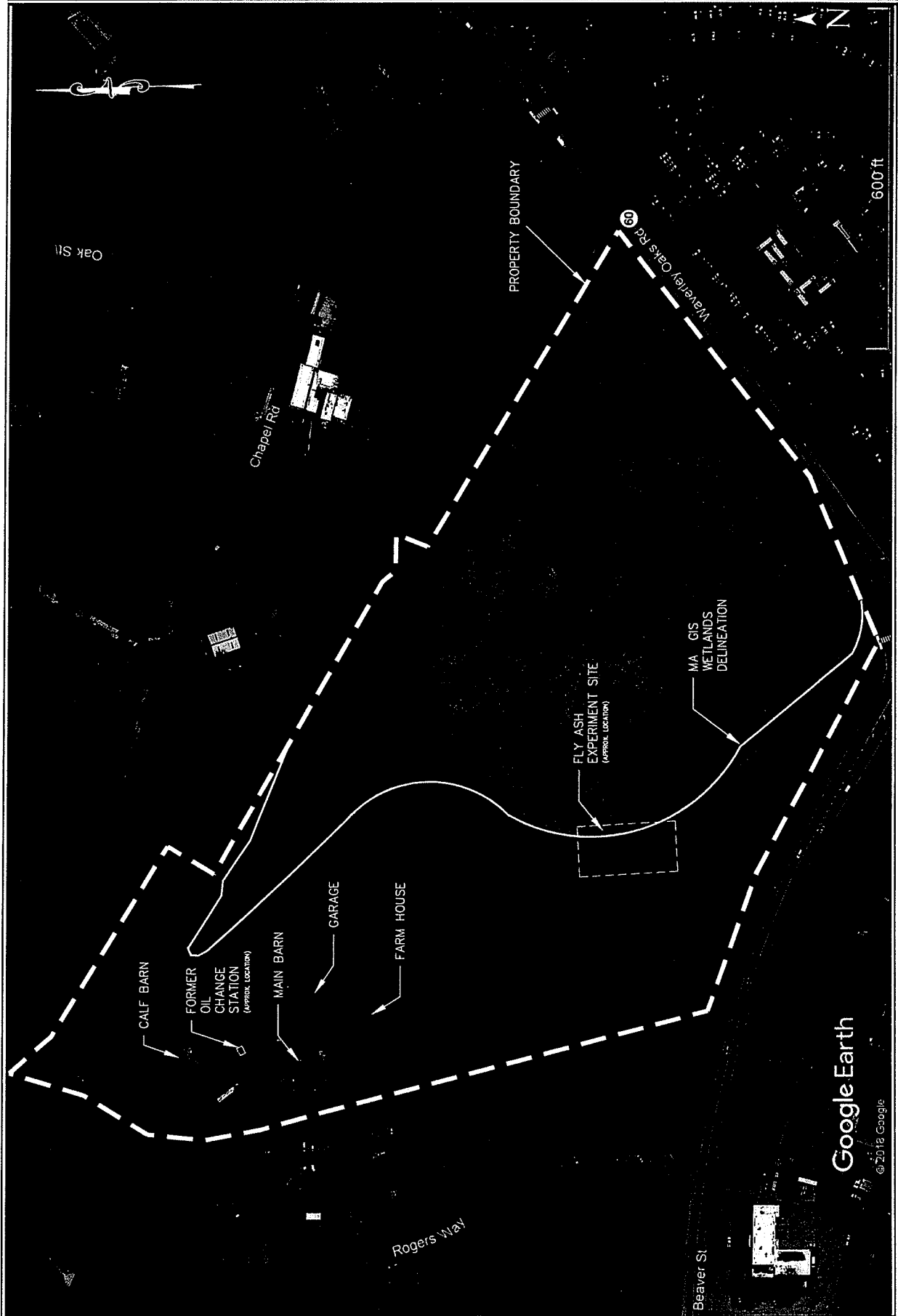
[illegible]

**SITE PLAN**  
**225 - 227 BEAVER STREET**  
**PHASE I SITE ASSESSMENT**  
**WALTHAM, MA**

CDW

FIGURE 2

1830.0



## **APPENDIX A**



## Asbestos Identification Laboratory

165 New Boston St., Ste 227  
Woburn, MA 01801  
781-932-9600

Web: [www.asbestosidentificationlab.com](http://www.asbestosidentificationlab.com)  
Email: [mikemanning@asbestosidentificationlab.com](mailto:mikemanning@asbestosidentificationlab.com)

Batch: 48695

**NVLAP**<sup>®</sup>  
Lab Code: 200919-0

December 02, 2019

Alan Sundquist  
CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760

**Project Name:** 225 Beaver St  
**Project Number:** 1830.10  
**Date Sampled:** 2019-11-20  
**Work Received:** 2019-11-25  
**Work Analyzed:** 2019-12-02

**Analysis Method:** BULK PLM ANALYSIS EPA/600/R-93/116

Dear Alan Sundquist,

Asbestos Identification Laboratory has completed the analysis of the samples from your office for the above referenced project. The information and analysis contained in this report have been generated using the EPA /600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or products that contain more than 1% of any kind or combination of asbestos are considered an asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The results of the point counting supersede visual PLM results. Results in this report only relate to the items tested. This report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

Laboratory results represent the analysis of samples as submitted by the customer. Information regarding sample location, description, area, volume, etc., was provided by the customer. Asbestos Identification Laboratory is not responsible for sample collection activities or analytical method limitations. Unless notified in writing to return samples, Asbestos Identification Laboratory discards customer samples after 30 days. Samples containing subsamples or layers will be analyzed separately when applicable. Reports are kept at Asbestos Identification Laboratory for three years. This report shall not be reproduced, except in full, without the written consent of Asbestos Identification Laboratory.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Alan Sundquist for your business.

Michael Manning  
Owner/Director

December 02, 2019

Alan Sundquist  
CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760

**Project Name:** 225 Beaver St  
**Project Number:** 1830.10  
**Date Sampled:** 2019-11-20  
**Work Received:** 2019-11-25  
**Work Analyzed:** 2019-12-02

**Analysis Method:** BULK PLM ANALYSIS EPA/600/R-93/116

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
1A	Sheetrock W/Paint	2nd Floor Left	multi	Hair 10	None Detected
538895				Non-Fibrous 90	
1B	Sheetrock W/Paint	2nd Floor Left	multi	Hair 10	None Detected
538896				Non-Fibrous 90	
1C	Sheetrock W/Paint	2nd Floor Left	multi	Hair 10	None Detected
538897				Non-Fibrous 90	
2A	9x9 Beige W/Grey Floor Tile	Kitchen	tan	Other 10	None Detected
538898				Non-Fibrous 90	
2B	9x9 Beige W/Grey Floor Tile	Kitchen	tan	Other 10	None Detected
538899				Non-Fibrous 90	
2C	9x9 Beige W/Grey Floor Tile	Kitchen	tan	Other 10	None Detected
538900				Non-Fibrous 90	
3A	Brown Mastic	Kitchen	brown	Cellulose 10	None Detected
538901				Non-Fibrous 90	
3B	Brown Mastic	Kitchen	brown	Cellulose 10	None Detected
538902				Non-Fibrous 90	
3C	Brown Mastic	Kitchen	brown	Cellulose 10	None Detected
538903				Non-Fibrous 90	
4A	Black Paint	Basement Wall	black	Non-Fibrous 100	None Detected
538904					
5A	Ceiling Plaster	1st Floor Bedrooms	multi	Cellulose 20	None Detected
538905				Non-Fibrous 80	
5B	Ceiling Plaster	1st Floor Bedrooms	multi	Cellulose 20	None Detected
538906				Non-Fibrous 80	
5C	Ceiling Plaster	1st Floor Bedrooms	multi	Cellulose 20	None Detected
538907				Non-Fibrous 80	
6A	Ceiling Plaster White	Kitchen	white	Non-Fibrous 100	None Detected
538908					



FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
6B	Ceiling Plaster White	Kitchen	white	Non-Fibrous 100	None Detected
538909					
6C	Ceiling Plaster White	Kitchen	white	Non-Fibrous 100	None Detected
538910					
7A	Ceiling Plaster, Brown	Kitchen	brown	Non-Fibrous 100	None Detected
538911					
7B	Ceiling Plaster, Brown	Kitchen	brown	Non-Fibrous 100	None Detected
538912					
7C	Ceiling Plaster, Brown	Kitchen	brown	Non-Fibrous 100	None Detected
538913					
8A	White Ceiling Tile	2nd Floor Bath	tan	Cellulose 90 Non-Fibrous 10	None Detected
538914					
8B	White Ceiling Tile	2nd Floor Bath	tan	Cellulose 90 Non-Fibrous 10	None Detected
538915					
8C	White Ceiling Tile	2nd Floor Bath	tan	Cellulose 90 Non-Fibrous 10	None Detected
538916					
9A	Tan Floor Tile		gray	Non-Fibrous 100	None Detected
538917					
10A	Grey Corrugated Roof Tile	Calf Barn	gray	Other 10 Non-Fibrous 70	Detected Chrysotile 20
538918					
10B	Grey Corrugated Roof Tile	Calf Barn	green		Not Analyzed
538919					
10C	Grey Corrugated Roof Tile	Calf Barn			Not Analyzed
538920					
11A	12x12 White W/Grey Tile	Large Room	white	Non-Fibrous 100	None Detected
538921					
11B	12x12 White W/Grey Tile	Large Room	white	Non-Fibrous 100	None Detected
538922					
11C	12x12 White W/Grey Tile	Large Room	white	Non-Fibrous 100	None Detected
538923					
12A	Tan Mastic	Large Room	tan	Cellulose 10 Non-Fibrous 90	None Detected
538924					
12B	Tan Mastic	Large Room	tan	Cellulose 10 Non-Fibrous 90	None Detected
538925					
12C	Tan Mastic	Large Room	tan	Cellulose 10 Non-Fibrous 90	None Detected
538926					

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
13A	White Ceiling Plaster	Large Room	white	Non-Fibrous 100	None Detected
538927					
13B	White Ceiling Plaster	Large Room	white	Non-Fibrous 100	None Detected
538928					
13C	White Ceiling Plaster	Large Room	white	Non-Fibrous 100	None Detected
538929					
14A	9x9 Maroon/Black Tile	105	multi	Cellulose 40	None Detected
538930				Non-Fibrous 60	
15A	Vapor Paper	105	multi	Cellulose 70	None Detected
538931				Non-Fibrous 30	
16A	9x9 Black Floor Tile	105	black	Cellulose 40	None Detected
538932				Non-Fibrous 60	
17A	Vapor Paper	105	multi	Cellulose 70	None Detected
538933				Non-Fibrous 30	
					Not Analyzed
538934					

Monday 02 December

Analyzed by:



End of Report

Batch: 48695

Page 3 of 3

DUE MON DEC 2

CHAIN OF CUSTODY  
EPA/600/R-93/116

Asbestos Identification Lab



165 New Boston St.  
Suite 227  
Woburn, MA 01801  
(781)932-9600  
www.asbestosidentificationlab.com

Date Sampled: 11-20 11-21-19

BATCH# 48695 Rev 06/16

Page 1 of 9

Turnaround Time Sample Method

Less 3 Hrs ☒ Bulk

Same Day ☐ Soil

Next Day ☐ Wipe

☒ Two Day (3 day) ☐ Point Count

Stop on 1st Positive? ☒ Yes ☐ No

Notify Method: Mail/E-Mail/Verbal

Analyzed By: [Signature] Date: 12-2-19

Client: Cow Consultants Inc

Address: 6 HURON DRIVE NATICK MA

Project Site & #: BEAVER ST 1B30.10

Phone / email address: ASBESTOSIDENTIFICATIONLAB.COM

508 875 2657. COWCONSULTANTS.COM

Contact: ALAN SWOEGUST

Relinquish by/date: 11-25-19

Received by/date: 11-25-19

# of Samples Received: 40

Lab ID# (Lab Use Only)		Field ID/ (Client Reference)	Material / Location	Temp in Celsius = 23					Stereo Scope					Optical Properties							RI	Non-Asbestos Percentage (%)					
				% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	=	⊥	Fiberglass	Mineral Wool	Cellulose		Hair	Synthetic	Other	Non-Fibrous		
538895		1A	Material SHEET ROCK w/PAINT Location 2ND FLOOR LEFT	6M	NG	5		Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																90			
96		1B	Material " " Location	0M	NG	5		Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																20			
97		1C	Material " " Location	0M	NG	5		Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																40			

Lab ID# (Lab Use Only)		Field ID/ (Client Reference)		Temp in Celsius = _____	Stereo Scope					Optical Properties							RI	Non-Asbestos Percentage (%)								
Material / Location				% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals		Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism		⊥	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
92	2A	Material 9x9 BELCE w/gray FIBERGLASS Location KITCHEN		0 +	g g	g g	✓	✓	Chrysotile															10	4%	90
99	2B	Material " " Location		0 +	g g	g g	✓	✓	Chrysotile															10	4%	90
93	2C	Material " " Location		0 +	g g	g g	✓	✓	Chrysotile															10	4%	90
01	3A	Material Blown MASTIC Location KITCHEN		0 Br	g g	g g	✓	✓	Chrysotile															10	4%	90
02	3B	Material " " Location		0 Br	g g	g g	✓	✓	Chrysotile															10	4%	90

Lab ID# Lab Use Only!		Temp in Celsius = _____		Stereo Scope					Optical Properties							Non-Asbestos Percentage (%)						
Field ID/ (Client Reference)	Material / Location	% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
3C	Material 11 Location	0	Br	S	S	-	Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite									12					2	
4A	Material BLACK PAINT Location BASEMENT WALL	0	Bl	D	g	✓	Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite															100
5A	Material CEILING PLASTER Location 1st Floor BED Rooms	0	✓	✓	Bl	g	Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite										20					80
5B	Material ✓ Location	0	✓	✓	Bl	g	Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite										17					82
5C	Material ✓ Location	0	✓	✓	Bl	g	Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite										12					88

[illegible]

[illegible]

PIA



[illegible]

Lab ID# Lab Use Only!		Field ID/ (Client Reference)	Temp in Celsius =	Stereo Scope					Optical Properties							Non-Asbestos Percentage (%)						
Material / Location			% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
27	13A	Material: WHITE Location: CEILING PLASTER WALLS ROOM		0	W	✓	28	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite														100
28	13B	Material: W Location:		0	W	✓	28	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite														100
29	13C	Material: W Location:		0	W	✓	28	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite														100
30	14A	Material: 9x9 Location: MASON/BACK TILE		0	W	88	✓	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite									70					60
31	15A	Material: VARIO Location: PAPER		0	W	✓	28	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite									70					30

Lab ID# Lab Use Only!		Field ID/ (Client Reference)		Temp in Celsius =	Stereo Scope					Optical Properties										Non-Asbestos Percentage (%)												
Material / Location				% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals										Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
32	16A	Material 9x9 Black Floor Tile	Location 105	0	Dark	+	+	+	Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																							
33	17A	Material VAPOR PAPER	Location 105	0	~	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																							
		Material	Location						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																							
		Material	Location						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																							
		Material	Location						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																							
		Material	Location						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																							
		Material	Location						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																							
		Material	Location						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																							



## Asbestos Identification Laboratory

165 New Boston St., Ste 227  
Woburn, MA 01801  
781-932-9600

Web: [www.asbestosidentificationlab.com](http://www.asbestosidentificationlab.com)  
Email: [mikemanning@asbestosidentificationlab.com](mailto:mikemanning@asbestosidentificationlab.com)

Batch: 49578



Lab Code: 200919-0

January 06, 2020

Alan Sundquist  
CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760

**Project Name:** 1830 Beaver St.,  
**Project Number:**  
**Date Sampled:** 2020-01-06  
**Work Received:** 2020-01-06  
**Work Analyzed:** 2020-01-06

**Analysis Method:** BULK PLM ANALYSIS EPA/600/R-93/116

Dear Alan Sundquist,

Asbestos Identification Laboratory has completed the analysis of the samples from your office for the above referenced project. The information and analysis contained in this report have been generated using the EPA /600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or products that contain more than 1% of any kind or combination of asbestos are considered an asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The results of the point counting supersede visual PLM results. Results in this report only relate to the items tested. This report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

Laboratory results represent the analysis of samples as submitted by the customer. Information regarding sample location, description, area, volume, etc., was provided by the customer. Asbestos Identification Laboratory is not responsible for sample collection activities or analytical method limitations. Unless notified in writing to return samples, Asbestos Identification Laboratory discards customer samples after 30 days. Samples containing subsamples or layers will be analyzed separately when applicable. Reports are kept at Asbestos Identification Laboratory for three years. This report shall not be reproduced, except in full, without the written consent of Asbestos Identification Laboratory.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Alan Sundquist for your business.

Michael Manning  
Owner/Director

January 06, 2020

Alan Sundquist  
CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760

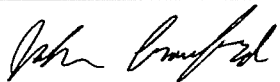
**Project Name:** 1830 Beaver St.,  
**Project Number:**  
**Date Sampled:** 2020-01-06  
**Work Received:** 2020-01-06  
**Work Analyzed:** 2020-01-06

**Analysis Method:** BULK PLM ANALYSIS EPA/600/R-93/116

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
1A 549748	Gray Fire Motar	Admin Bld.	gray	Non-Fibrous 100	None Detected
1B 549749	Gray Fire Motar	Admin Bld.	gray	Non-Fibrous 100	None Detected
1C 549750	Gray Fire Motar	Admin Bld.	gray	Non-Fibrous 100	None Detected
2A 549751	Green Vapor Barrier	Farmhouse	green	Cellulose 90 Non-Fibrous 10	None Detected
2B 549752	Green Vapor Barrier	Farmhouse	green	Cellulose 90 Non-Fibrous 10	None Detected
2C 549753	Green Vapor Barrier	Farmhouse	green	Cellulose 90 Non-Fibrous 10	None Detected
3A 549754	Black Vapor Barrier	Farmhouse	black	Cellulose 50 Non-Fibrous 50	None Detected
3B 549755	Black Vapor Barrier	Farmhouse	black	Cellulose 50 Non-Fibrous 50	None Detected
3C 549756	Black Vapor Barrier	Farmhouse	black	Cellulose 50 Non-Fibrous 50	None Detected

Monday 06 January

Analyzed by:



End of Report

Batch: 49578

Page 1 of 1

# CHAIN OF CUSTODY

EPA/600/R-93/116

## Asbestos Identification Lab

165 New Boston St.

Suite 227

Woburn, MA 01801

(781) 932-9600

www.asbestosidentificationlab.com



Date Sampled: 11/6/2020

BATCH#

495178

Rev 06/16

Page 1 of 3

Turnaround Time Sample Method

☐ Less 3 Hrs

☒ Same Day

☐ Next Day

☐ Two Day

Stop on 1st Positive? ☒ Yes ☐ No

Notify Method: Mail/E-Mail/Verbal

Analyzed By: [Signature]

Date: 11/6/20

Sample Method

☒ Bulk

☐ Soil

☐ Wipe

☐ Point Count

RI Non-Asbestos Percentage (%)

Lab ID# (Lab Use Only)

Field ID/ (Client Reference)

Material / Location

Temp in Celsius = 15

Stereo Scope

% of Asbestos

Color

Homogeneity

Texture

Friable

Asbestos Minerals

Asbestos %

Morphology

Extinction

Sign of Elongation

Birefringence

Pleochroism

||  
T

Fiberglass

Mineral Wool

Cellulose

Hair

Synthetic

Other

Non-Fibrous

549748

1A

Material ~~1A~~  
Colony F15 WORK  
Location AOMN BLD

% of Asbestos

Color

Homogeneity

Texture

Friable

Chrysotile  
Amosite  
Crocidolite  
Tremolite  
Anthophyllite  
Actinolite

Asbestos %

Morphology

Extinction

Sign of Elongation

Birefringence

Pleochroism

||  
T

Fiberglass

Mineral Wool

Cellulose

Hair

Synthetic

Other

Non-Fibrous

49

1B

Material  
Location

% of Asbestos

Color

Homogeneity

Texture

Friable

Chrysotile  
Amosite  
Crocidolite  
Tremolite  
Anthophyllite  
Actinolite

Asbestos %

Morphology

Extinction

Sign of Elongation

Birefringence

Pleochroism

||  
T

Fiberglass

Mineral Wool

Cellulose

Hair

Synthetic

Other

Non-Fibrous

50

1C

Material  
Location

% of Asbestos

Color

Homogeneity

Texture

Friable

Chrysotile  
Amosite  
Crocidolite  
Tremolite  
Anthophyllite  
Actinolite

Asbestos %

Morphology

Extinction

Sign of Elongation

Birefringence

Pleochroism

||  
T

Fiberglass

Mineral Wool

Cellulose

Hair

Synthetic

Other

Non-Fibrous

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celsius = _____	Stereo Scope					Optical Properties							RI	Non-Asbestos Percentage (%)						
Material / Location		% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	=	⊥	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
57	2A	Material <i>GREEN</i> Location <i>FARM HOUSE</i>	<i>Gr</i>	<i>Gr</i>	<i>N</i>	<i>F/Gr</i>	<i>N</i>	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite										<i>R</i>	<i>90</i>			<i>10</i>
52	2B	Material <i>V</i> Location	<i>Gr</i>	<i>Gr</i>	<i>N</i>	<i>F/Gr</i>	<i>N</i>	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite										<i>R</i>	<i>90</i>			<i>10</i>
53	2C	Material <i>V</i> Location	<i>Gr</i>	<i>Gr</i>	<i>N</i>	<i>F/Gr</i>	<i>N</i>	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite										<i>R</i>	<i>90</i>			<i>10</i>
54	3A	Material <i>BLACK</i> Location <i>FARM HOUSE</i>	<i>Gr</i>	<i>Gr</i>	<i>N</i>	<i>F/Gr</i>	<i>N</i>	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite										<i>R</i>	<i>50</i>			<i>50</i>
55	3B	Material <i>N</i> Location	<i>Gr</i>	<i>Gr</i>	<i>N</i>	<i>F/Gr</i>	<i>N</i>	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite										<i>R</i>	<i>50</i>			<i>50</i>

Lab ID# (Lab Use Only)		Field ID/ (Client Reference)	Material / Location	Stereo Scope					Asbestos Minerals	Optical Properties						RI	Non-Asbestos Percentage (%)							
Temp in Celcius = _____				% of Asbestos	Color	Homogeneity	Texture	Friable		Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism			⊥	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other
56	3C		Material Location 4		off blue	N	F 1/2	N	Chrysotile															
			Material Location						Chrysotile															
			Material Location						Chrysotile															
			Material Location						Chrysotile															
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			Material Location						Chrysotile															
			Material Location						Chrysotile															



## **APPENDIX B**



**ProScience Analytical Services, Inc.**  
22 Cummings Park, Woburn, MA 01801

Telephone: 781-935-3212  
Facsimile: 781-932-4857  
Email: [chemistry@proscience.net](mailto:chemistry@proscience.net)

## Laboratory Report

Contact: Alan Sundquist  
Client: CDW Consultants, Inc.  
Address: 6 Huron Drive  
Natick, MA 01760

Batch #: C 301435  
Date received: 11/25/2019  
Date analyzed: 11/26/2019  
Date of report: 11/26/2019

Project # 1830.10  
P.O.# N/A  
Project Site: Beaver St.

AIHA-LAP, LLC Lab ID 102754

**Lead Analysis In Paint Using SOP Based on SW846-7420/3051**  
Results in weight percent on an "as received" weight basis

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 638190	LBP 1	11/20/19	Black Paint	<RL	0.019	
C 638191	LBP 2	11/20/19	White Paint Molding / Stairs	0.27	0.010	
C 638192	LBP 3	11/20/19	White Ceiling Paint	<RL	0.0053	paint+plaster
C 638193	LBP 4	11/20/19	White Wall Paint	<RL	0.023	
C 638194	LBP 5	11/20/19	Blue Paint Wall / Door	0.32	0.0086	
C 638195	LBP 6	11/20/19	Gray Paint Door / Molding	0.26	0.0074	paint+wood
C 638196	LBP 7	11/20/19	Black Paint Molding / Stairs	0.069	0.014	

  
Simona Peavey, Tech. Manager Chemistry  
Aimee Cormier, Lab Director

Page 1 of 1

Unless otherwise indicated, all samples were received in acceptable condition.  
All results apply only to the samples tested and as received and are accurate to no more than three significant figures.  
Unless otherwise indicated, all the quality control criteria for the method above have been met.  
RL-Reporting Limit(% by weight) Note on units: mg/Kg is the same as ppm by weight.  
RL-Reporting Limit; Defined as the lowest concentration the laboratory can accurately quantitate.  
The Report shall not be reproduced except in full without the written approval of the laboratory.  
Please visit our website at [www.proscience.net](http://www.proscience.net) for the current accreditation status.



## **APPENDIX C**



**PRE-DEMOLITION/RENOVATION ASBESTOS SURVEY**

**240 BEAVER STREET  
WALTHAM, MASSACHUSETTS**

**ATC PROJECT NO. 01-207319.07.43  
DOCUMENT NO. 48496  
NOVEMBER 28, 2016**

Prepared by:

ATC Group Services LLC  
588 Silver Street  
Agawam, MA 01001  
Phone: (413) 789-3530  
Fax: (413) 789-2776

Prepared for:

University of Massachusetts  
117 Draper Hall  
Amherst, MA 01003

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4.0 DISCUSSION AND INTERPRETATION .....	5
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### TABLES:

Tables 3.1.A – Table 3.1.L

### APPENDICES:

Appendix A     October 2016 Laboratory Data

---

## EXECUTIVE SUMMARY

ATC Group Services LLC formally, Environmental Compliance Services, Inc. (ECS) has completed a survey on October 19, 2016 as an addition to previous surveys for asbestos containing materials (ACM) at six structures located at 240 Beaver Street in Waltham, MA. The non-destructive surveys were performed to identify regulated materials that may be disturbed if any demolition or renovation activities are proposed in the future. Survey findings for the subject sites are presented in the body of this report. The results of this survey do not meet the requirements of the National Emissions Standard for Hazardous Air Pollutants (NESHAPs) for building demolition due to the following limitations:

### **Administration Building**

- Destructive sampling was not employed due to the occupied nature of the building.
- Roof sampling was not performed due to the occupied nature of the building.

### **Boiler House**

- Interior of the smoke stack was not assessed.
- Boilers were not inspected.

### **Corn Lab**

- Exterior walk-in cooler was not inspected.

### **Throughout Property**

- Underground utilities were not assessed (heating and electrical).

ATC inspectors collected an additional 84 bulk samples of suspect ACM from the interior and exterior of various buildings throughout the property. These samples were analyzed by an accredited laboratory for asbestos content. Analytical results indicate there are numerous materials that are ACM or assumed ACM. Some ACMs identified are components within a building system, such as mastic and floor tile. In this case, the entire system is considered asbestos containing. The inventory of ACM's below is a combination of the previous survey results and the current survey results.

### **Administration Building**

Findings are presented in Tables 3.1.A (Asbestos Containing Materials) and 3.1.G (No Asbestos Detected) and summarized below;

#### **ACM –**

- Thermal systems insulation
- Gray with white specks 9"x9" floor tile and associated mastic
- Cream with gray and black specks 12"x12" floor tile and associated mastic
- Brown 9"x9" floor tile and associated mastic
- Brown 12"x12" floor tile and associated mastic
- Black with white specks 12"x12" floor tile and associated mastic
- Window glazing compound
- Window casing caulking
- Sink countertop (transite) and stored transite boards
- Square patterned linoleum countertop
- Blue and white residual acoustical ceiling plasters
- Brown stick pin adhesive on duct work
- Black soundboard adhesive

---

### **Gray Building**

Findings are presented in Tables 3.1.B (Asbestos Containing Materials) and 3.1.H (No Asbestos Detected) and summarized below;

#### **ACM-**

- Gray with white specks 9"x9" floor tile and associated mastic
- Vapor barrier paper
- Green or blue transite boards
- Laboratory sink countertops (transite) and fume hood counter
- White sink undercoating
- Thermal systems insulation
- Window glazing compound
- Window casing caulking
- Black with white streaks counter top sheetgoods
- Decorative plaster skim coat
- Cementitious coating over cork
- Brown adhesive associated with faux tile sink splash guard

### **Greenhouses**

Findings are presented in Tables 3.1.C (Asbestos Containing Materials) and 3.1.I (No Asbestos Detected) and summarized below;

#### **ACM-**

- Thermal systems insulation
- Corrugated wall panel and transite board
- Sink undercoat
- Window glazing compound
- Window casing compound
- Caulking
- Black panel adhesive
- Yellow foam insulation adhesive

### **Corn Lab**

Findings are presented in Tables 3.1.D (Asbestos Containing Materials) and 3.1.J (No Asbestos Detected) and summarized below;

#### **ACM-**

- Gray with white streaks 9"x9" floor tile and associated mastic
- Stored transite board
- Stored corrugated transite panels
- Door casing caulking
- Gray sink undercoat
- Window glazing compound for the greenhouse



---

**Pesticide Shed and Greenhouse**

Findings are presented in Tables 3.1.E (Asbestos Containing Materials) and 3.1.K (No Asbestos Detected) and summarized below;

**ACM-**

- Window glazing compound

**Boiler Building**

Findings are presented in Tables 3.1.F (Asbestos Containing Materials) and 3.1.L (No Asbestos Detected) and summarized below;

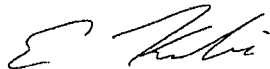
**ACM-**

- Door casing caulking
- Exterior window casing caulking
- Exterior window glazing compound
- Roping around smoke stack metal breeching
- Incinerator components
- Yellow insulation between metal boiler breeching flanges
- Floor tile in storage (boxes)

Analytical data sheets for samples collected during the October 2016 survey are provided as Appendix A. Upon request ATC can provide the 2007 survey report including PLM and Paint Chip lab data.

The following report summarizes the independent conclusions representing ATC's best professional judgment based on information and data available to us during the course of this investigation. Factual information regarding operations, conditions, and test data provided by the Client, owner, or their representative has been assumed to be correct and complete. Additionally, the conclusions presented are based on the conditions that existed at the time of the assessment.

Inspector Signature:



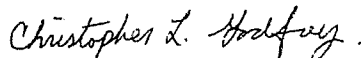
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Eric Kubic  
Massachusetts Asbestos Inspector # AI000327  
Senior Field Technician



---

Robert Larose  
Field Technician



---

Christopher L. Godfrey  
Senior Project Manager

## 1.0 INTRODUCTION

This survey was performed at the request of Mr. Michael Grover with the University of Massachusetts, Amherst Environmental Health & Safety department for the purpose of identifying hazardous building materials that may exist within the currently occupied and unoccupied structures at 240 Beaver Street in Waltham, Massachusetts. ATC conducted limited asbestos inspections on six structures located at the property. The structures inspected are as follows: Administrative Building, Gray Building, Greenhouse(s), Corn Lab, Boiler House and Pesticide Shed. The Administrative Building is an occupied 3 level office building. The Gray Building is an unoccupied 3 level building with a functioning and occupied garage addition. The Greenhouses are 1 level unoccupied structures associated with the Gray Building, Corn Lab and Pesticide Shed. The Corn Lab is a 1 level unoccupied laboratory building. The Boiler House is a 2 level occupied mechanical space. The Pesticide Shed is a 1 level occupied storage structure.

Regulatory requirements and survey practices applicable to demolition projects in Massachusetts are as follows, but not limited to the following:

### *Asbestos*

- The United States Environmental Protection Agency (USEPA) National Emissions Standard for Hazardous Air Pollutants (NESHAPs, 40 CFR 61, Subpart M) requires facilities be inspected by competent persons for the presence of asbestos containing materials (ACM) which could or will be disturbed during renovation, construction and demolition activities. Where quantities of ACM exceed 160 square feet or 260 linear feet, asbestos abatement (removal) is required.
- The Massachusetts Department of Environmental Protection (MassDEP) additionally regulates ACM under 310 CMR 7.15 & 310 CMR 19.061.
- The Massachusetts Department of Labor and Workforce Development, Department of Occupational Safety (MA DLWD-DOS) regulates asbestos worker protection and work practices under 453 CMR 6.00.
- The Occupational Safety and Health Administration (OSHA) regulates asbestos worker protection under 29 CFR 1926.1101.

### 1.1 LIMITATIONS

The term “non-destructive sampling method” refers to a method of collecting samples that does not significantly impact interior or exterior finishes of the building. Surveys for the presence of ACM are therefore limited to those materials accessible by non-destructive sampling methods. ACM may be present in materials not accessible by this sampling methodology, and may be encountered during renovation or demolition of the structure. The term “destructive sampling method” refers to the method of collecting samples that would require destruction of various building systems (i.e. wall cavities, ceilings, flooring materials, roofing) for the purpose of locating hidden heating, plumbing, or other building components that may contain ACM. Destructive methods are recommended for properties slated for demolition. Additional limitations may exist for both destructive and non-destructive sampling methods. Certain locations of the building may be physically inaccessible, or inaccessible due to electrical, mechanical, structural, or other hazards which might exist in the structure at the time of the survey.

ATC evaluated accessible spaces of the buildings. Areas that were accessible only through structurally damaging methods or were part of or within energized equipment were not evaluated.

Two newer vintage boilers were observed within the boiler house. It appears that the identical boilers were installed sometime during the 2000's. One of the boilers was operating at the time of our survey and the other boiler was being used for parts. It cannot be definitively stated that this equipment does not contain ACM without performing destructive sampling. It is recommended that a NESHAPs trained person evaluate this equipment before demolition activities.

An exterior walk-in cooler was observed behind the Corn Lab. It cannot be definitively stated that this equipment does not contain ACM without performing destructive sampling. It is recommended that a NESHAPs trained person evaluate this equipment before demolition activities.

ATC inspectors suspect that there are underground utilities that may contain hazardous materials (Asbestos, Lead, PCB's etc). ATC recommends that any MEP drawings be consulted prior to any excavation that may unearth any potential hazardous materials.

Suspect ACM subsequently identified or encountered in physically inaccessible areas during demolition and/or demolition activities and not listed in this report should be assumed to contain asbestos unless testing confirms otherwise.

The following areas were not included in the scope of work at the time of this evaluation.

- Materials only accessible through structural demolition;
- Materials entombed or beneath concrete;
- Materials associated with functional equipment, machinery, and building systems including mechanical, plumbing, electrical and HVAC; and
- Materials below-grade.

## 2.0 METHODS AND MATERIALS

### 2.1 ASBESTOS

Samples were collected per regulations governing asbestos surveys. Samples were placed into plastic bags with an air tight seal. Labels were affixed to the sample bags with specific nomenclature.

Bulk samples were analyzed by Polarized Light Microscopy (PLM) using the USEPA/600/R-93/116 method. Sample analysis was conducted by ProScience Analytical Services, Inc., 22 Cummings Park, Woburn, Massachusetts (NVLAP Accreditation 2000090-0).

There are six minerals grouped into the term "asbestos". Chrysotile, amosite, and crocidolite are the asbestos minerals most commonly found in building materials. ACM is defined as a material containing more than one percent (1%) asbestos by weight. ACBM is a subset of materials in the group ACM and are considered to be ACM that is found in or on interior structural members of a building. Materials found to be asbestos containing are listed in Section 3.0. Exact sample compositions are included in the laboratory reports or chains of custody found in Appendix A.

Types, locations, estimated quantities, and conditions of ACM or assumed ACM are shown in Tables 3.1.A, B, C, D, E and F. Suspect materials sampled and found not to contain asbestos are found in Tables 3.1.G, H, I, J and K.

PLM is the root method used for the identification of ACM. The USEPA Office of Research and Development (USEPA/ORD) has reviewed data from performance audits of various laboratories performing PLM. The results of that review indicated an unacceptable number of false negatives and positives for visual estimation of materials containing less than 10% asbestos. On the basis of those findings the NESHAP regulations were amended on November 20, 1990 (Federal Register, V.55, and N.224). The revisions state that if the analyst detects asbestos in the sample and estimates the amount to be less than 10% by visual estimation, the parties legally responsible (owner or operator) for the building may (1) elect to assume the amount to be greater than 1% and treat the material as ACM or (2) require verification of the amount by point counting. Point counting is a technique used to quantify the amount of asbestos present in a sample on which PLM has already been performed. ATC recommends point counting re-analysis for asbestos values less than 10%, and where applicable, those results are reflected in this report. In instances where client authorization is not received for this re-analysis, PLM visual results indicating a trace or 1% value will be reported as assumed ACM as required by item (1) above.

A similar situation exists for matrix bound fibers such as those found in floor tiles, mastics, and asphalt based materials. The organic matrix of these bulk samples may interfere with the identification and quantification of asbestos mineral content. These types of samples are generally referred to as Non-friable organically bound (NOB) materials. Transmission Electron Microscopy (TEM-NOB) is a method that utilizes a combination of special sample preparation techniques and high magnification to quantify asbestos content with greater accuracy than PLM. Currently only the State of New York has regulations requiring TEM-NOB re-analysis of suspect ACM for which negative or trace determination resulted from PLM analysis. Although additional cost is involved, ATC recommends TEM-NOB analysis under certain circumstances, as a state of the art means of survey. ATC submitted one sample (17A- Brown/black styrofoam adhesive) for TEM-NOB analysis. The results confirmed that No Asbestos was detected in that sample.

### **3.0 RESULTS AND FINDINGS**

The results of this survey are presented below in tabular form. These tables summarize the nature, distribution and estimated quantity of ACM found during this survey and a previous survey conducted in 2007 by Environmental Compliance Services, Inc.

Asbestos Containing Materials are found in Tables 3.1.A, B, C, D, E and F.

Suspect materials sampled with No Asbestos Detected are found in Table 3.1.G, H, I, J, K and L.

## **4.0 DISCUSSION AND INTERPRETATION**

### **4.1 ASBESTOS**

Response actions are based in part upon our current understanding of area usage or future usage at the time of the survey. Removal is always required where pending demolition will disturb ACM's. Any material discovered in the course of demolition activities, which is not identified in this report, should be presumed to contain asbestos until sampling shows otherwise. Section 1.1 Limitations details areas that were deemed inaccessible or were not included in the scope of work.

## **5.0 CONCLUSION**

Asbestos abatement of items listed in Tables 3.1.A, B, C, D, E and F will be required prior to any demolition work that would disturb these materials. ATC recommends the preparation of an asbestos abatement design specification to direct the safe and efficient removal of ACM materials from these locations. ATC also recommends a timely response action related to ACMs which have been observed as damaged or otherwise non-intact, specifically ACMs within occupied spaces.

## **TABLES**

---



**Table 3.1.A**  
**Asbestos Containing Materials and Affected Building Component Systems**

**Administration Building**

Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
<b>Thermal Systems Insulation</b>							
N/A	Thermal Systems Insulation	Room 01	5%-80% Chrysotile and/or 30%-40% Amosite	TSI	Friable, Accessible	Intact	121 LF
Admin 18		Room 02		TSI	Friable, Accessible	Intact	75 LF
N/A		Room 03		TSI	Friable, Accessible	Intact	85 LF
N/A		Room 04		TSI	Friable, Accessible	Intact	110 LF
N/A		Room 05		TSI	Friable, Accessible	Intact	95 LF
N/A		Room 06		TSI	Friable, Accessible	Intact	100 LF
N/A		Room 07		TSI	Friable, Accessible	1 LF Damage, Remainder Intact	100 LF
N/A		Room 08		TSI	Friable, Accessible	Intact	155 LF
N/A		Room 09		TSI	Friable, Accessible	Intact	20 LF
N/A		Room 09A		TSI	Friable, Accessible	Intact	20 LF
N/A		Room 10		TSI	Friable, Accessible	Intact	20 LF
Admin 19		Room 12		TSI	Friable, Accessible	Intact	173 LF
Admin 22, 23, 24		Room 13		TSI	Friable, Accessible	Intact except for 6 LF, Accessible	67
Admin 20, 21		Room 14 and 14A		TSI	Friable, Accessible	Intact except for 9 LF	150 LF
N/A		Room 15		TSI	Friable, Accessible	Intact	70 LF
N/A		Room 16		TSI	Friable, Accessible	Intact	50 LF
N/A		Room 16A		TSI	Friable, Accessible	Intact except for 1 LF, Accessible	100 LF
N/A		Room 17		TSI	Friable, Accessible	Intact	150 LF
N/A		Room 18		TSI	Friable, Accessible	Intact	21 LF
N/A		Room 19		TSI	Friable, Accessible	5 LF Damaged, Remainder Intact	40 LF
N/A		Hallway 099B and 099D		TSI	Friable, Accessible	Intact	230 LF
N/A		Hallway 099 E		TSI	Presumed above hard ceiling	Condition unknown	100 LF
N/A		Hallway 099C		TSI	Friable, Accessible	Intact	4 LF
N/A		Hallway 099A		TSI	Friable, Accessible	Intact	20 LF
N/A		Hallway adjacent to 099A		TSI	Friable, Accessible	Intact	25 LF
N/A		Room 101		TSI	Friable, Accessible	Intact	2 LF
N/A		Room 102		TSI	Friable, Accessible	Intact	15 LF
N/A		Room 103		TSI	Friable, Accessible	Intact	40 LF
N/A		Room 104		TSI	Friable, Accessible	1 LF Damaged, Remainder Intact	40 LF
N/A		Room 105		TSI	Friable, Accessible	Intact	40 LF
N/A		Room 108A		TSI	Friable, Accessible	1 SF Damaged, Remainder Intact	75 LF, 5 SF debris
N/A		Room 109A		TSI	Friable, Accessible	Intact	20 LF
N/A		Room 112		TSI	Friable, Accessible	Intact	15 LF
N/A		Room 117		TSI	Friable, Accessible	Intact	15 LF
N/A		Room 119		TSI	Friable, Accessible	Intact	50 LF

N/A				TSI	Friable, Accessible	Intact	10 LF
N/A				TSI	Friable, Accessible	Intact	25 LF
N/A				TSI	Friable, Accessible	Intact	10 LF
N/A				TSI	Friable, Accessible	Intact	2 LF
N/A				TSI	Friable, Accessible	Intact	12 LF
N/A				TSI	Friable, Accessible	Damaged	3 LF
N/A				TSI	Friable, Accessible	Intact	8 LF
N/A				TSI	Friable, Accessible	Intact	15 LF
N/A				TSI	Friable, Accessible	Intact	3 LF
N/A				TSI	Friable, Accessible	Damaged	13 LF
N/A				TSI	Friable, Accessible	Damaged	13 LF
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Floor Tile and Associated Mastic							
	Residual black mastic	Room 03	2% Chrysotile	Misc.	Non-friable, accessible	Intact	100 SF
Admin 06, 6M, Admin 05, 5M Admin 34, 34M, Admin 50, 50M	Gray with white specks 9"x9" floor tile and associated mastic	Room 10		Misc.	Non-friable, accessible	Intact	230 SF
		Room 12		Misc.	Non-friable, accessible	Approx. 200 SF damaged	300 SF
		Room 16		Misc.	Non-friable, accessible	Intact	90 SF
		Room 101		Misc.	Non-friable, accessible	Intact	230 SF
		Room 104		Misc.	Non-friable, accessible	Intact	120 SF
		Room 119		Misc.	Non-friable, accessible	Intact	325 SF
		Room 207		Misc.	Non-friable, accessible	Intact	115 SF
		Room 208		Misc.	Non-friable, accessible	Intact	235 SF
		Room 211		Misc.	Non-friable, accessible	Intact	215 SF
		Room 212		Misc.	Non-friable, accessible	Intact	115 SF
		Room 213		Misc.	Non-friable, accessible	Intact	120 SF
		Room 214		Misc.	Non-friable, accessible	10 SF damaged	230 SF
Admin 02, 2M, Admin 03, 04, 07, 3M, 4M,	Cream with gray and black specks 12"x12" floor tile and associated mastic	Hallway 099E		Misc.	Non-friable, accessible	Intact	981 SF
		Room 19		Misc.	Non-friable, accessible	Intact	2,567 SF
Admin 25, 25M	Brown 9"x9" floor tile and associated mastic	Room 09		Misc.	Non-friable, accessible	20 SF Damaged	100 SF
		Room 09A		Misc.	Non-friable, accessible	Intact	100 SF
Admin 28, 28M	Brown 12"x12" floor tile and associated mastic	Hallway 099C		Misc.	Non-friable, accessible	Intact	62 SF
		Hallway 099D		Misc.	Non-friable, accessible	Intact	66 SF
		Room 102		Misc.	Non-friable, accessible	Intact	140 SF
		Room 105		Misc.	Non-friable, accessible	Intact	150 SF
		Room 108		Misc.	Non-friable, accessible	Intact	16 SF
		Room 108A		Misc.	Non-friable, accessible	Intact	170 SF
		Room 110		Misc.	Non-friable, accessible	Significantly Damaged	143 SF

Admin 25, 25M, Admin 46, Admin 54, Admin 38, 49, 38M	Brown 9"x9" floor tile and associated mastic	Room 112			Non-friable, accessible	Intact	250 SF
		Room 112A		Misc.	Non-friable, accessible	Intact	25 SF
		Room 117		Misc.	Non-friable, accessible	Intact	220 SF
		Room 118		Misc.	Non-friable, accessible	Intact	20 SF
		Room 120		Misc.	Non-friable, accessible	Intact	120 SF
		Room 121		Misc.	Non-friable, accessible	Intact	160 SF
		Room 122		Misc.	Non-friable, accessible	Intact	320 SF
		Room 124		Misc.	Non-friable, accessible	Intact	115 SF
		Hallway 199D		Misc.	Non-friable, accessible	Intact	170 SF
		Room 201		Misc.	Non-friable, accessible	Intact	225 SF
		Room 202		Misc.	Non-friable, accessible	Intact	112 SF
		Room 203		Misc.	Non-friable, accessible	Intact	110 SF
		Room 204		Misc.	Non-friable, accessible	Intact	340 SF
		Room 209		Misc.	Non-friable, accessible	Intact	340 SF
		Room 210		Misc.	Non-friable, accessible	Intact	135 Sf
		Hallway 299B and 299C		Misc.	Non-friable, accessible	Intact	425 SF
Admin 40, 40M	Black with white specks 12"x12" floor tile and associated mastic	Hallway 199B			Non-friable, accessible	Intact	340 SF
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Exterior window glazing and casing caulking							
Admin 31, 32, 33, 47, 48, 64, 65, 66	Window glazing compound and casing caulking	Exterior of building	2%-10% Chrysotile	Misc.	Non-friable, Accessible	~75% are Damaged	115 Windows
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Transite							
Admin 61	Transite Counter Top Sink	Room 11	15% Chrysotile	Misc.	Non-friable, accessible	Intact	26 SF
	Counter top transite	Room 214		Misc.	Non-friable, accessible	Damaged	30 SF
	Stored transite	Room 109		Misc.	Non-friable, Accessible	Intact	4 SF
		Room 205		Misc.	Non-friable, Accessible	Intact	30 SF
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Sheet goods on countertops							
07A, 07B	Square Pattern Linoleum on Counter	Room 101	20% Chrysotile	Misc.	Non-friable, Accessible	Intact	30 LF
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Admin 15B, 16B, 15W, 16W	Residual acoustical ceiling plaster (two layers, blue and white) left after abatement was completed.	Room 019 Perimeter	2% Chrysotile	Surf.	Friable, Accessible	Intact	1/4"-1/2" strip around the ceiling perimeter
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Miscellaneous							
01A, 01B	Brown Stick Pin Adhesive on Metal Ductwork	019- Auditorium	10% Chrysotile	Misc.	Non-Friable; Accessible	Intact	200 SF
13A, 13B	Black Soundboard Adhesive	Room 09A (Patch)	10% Chrysotile	Misc.	Non-Friable; Accessible	Intact	10 SF
		Room 202	10% Chrysotile	Misc.	Non-Friable; Accessible	Intact	30 SF

Table 3.1.B  
Asbestos Containing Materials and Affected Building Component Systems

Gray Building

Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Flooring and Associated Mastic							
Gray 10,10V, 11, 13, 27, 27P 28, 10M, 11M, 27M, 28M	Gray with white specks 9"x9" floor tile, Associated Vapor Barrier Paper and associated mastic	Room 105	<1%-15% Chrysotile	Misc.	Non-friable, accessible	Intact	350 SF
		1st floor hallway		Misc.	Non-friable, accessible	Intact	150 SF
		1st floor bathroom		Misc.	Non-friable, accessible	Intact	50 SF
		1st floor small storage room adjacent to large storage room		Misc.	Non-friable, accessible	Intact	150 SF
		2nd floor hallway		Misc.	Non-friable, accessible	Intact	200 SF
		Small room in 2nd floor hallway		Misc.	Non-friable, accessible	Intact	70 SF
		Room 202		Misc.	Non-friable, accessible	Intact	120 SF
		Room 202A		Misc.	Non-friable, accessible	Intact	175 SF
		Room 203		Misc.	Non-friable, accessible	Damaged	160 SF
		Room 203A		Misc.	Non-friable, accessible	Intact	85 SF
		Room 204		Misc.	Non-friable, accessible	Intact	260 SF
		Room 204A		Misc.	Non-friable, accessible	Intact	130 SF
		Room 221		Misc.	Non-friable, accessible	Intact	225 SF
		Room 221A		Misc.	Non-friable, accessible	Intact	160 SF
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Transite boards, Transite sinks, Sinks with undercoating and lab benches							
Gray 39	Green or blue transite boards	Room 105	5%-20% Chrysotile	Misc.	Non-friable, accessible	Intact	45 SF
		Room 201		Misc.	Non-friable, accessible	Intact	15 SF
		Room 203		Misc.	Non-friable, accessible	Intact	8 SF
		Room 204		Misc.	Non-friable, accessible	Intact	18 SF
		Basement near stairs to sub-basement		Misc.	Non-friable, accessible	Intact	5 SF
N/A	Fume hood counter	Room 204		Misc.	Non-friable, accessible	Intact	10 SF
Gray 24	Laboratory/sink countertops	1st floor large room		Misc.	Non-friable, accessible	Intact	12 SF
Gray 38	Laboratory/sink countertops	Room 201		Misc.	Non-friable, accessible	Intact	10 SF
Gray 42	Laboratory/sink countertops (small sink)	Room 204		Misc.	Non-friable, accessible	Intact	5 SF
09A, 09B	White Sink Undercoating	Room 105		Misc.	Non-friable, Accessible	Intact	1 Unit
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Thermal Systems/Insulation							
N/A	Thermal systems insulation	Sub-basement Pipe Chase into Greenhouse	Presumed	TSI	Friable, non-accessible	Unknown	~200 LF
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Window Glazing Compound							
Gray 43, 44, 45	Window glazing compound	Throughout	2% Chrysotile	Misc.	Non-friable, Accessible	Damaged	60 Units
12A, 12B	Window casing caulking	Garage Exterior	3% Chrysotile	Misc.	Non-friable, accessible	Damaged	6 Units
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Sheet goods							
10A, 10B	Black with white streaks countertop sheet goods	Room 105, Room 204	3% Chrysotile	Misc.	Non-friable, Accessible	Intact	50 SF
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Plaster Coatings							
08A, 08B, 08C	Decorative plaster skim	1st Floor Large Storage Room , Room 203 and Room 204	<1%	Misc.	Non-friable, Accessible	Damaged	1,200 SF

01A, Gray 07, Root Cellar 02A,	Cementitious coating over cork	Sub-basement Cooler	<1%	Misc.	Non-friable, accessible	Intact	550 SF
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Adhesives							
18A	Brown faux tile adhesive behind sink splash guard	Basement	2% Chrysotile	Misc.	Non-friable, accessible	Intact	10 SF
Notes: 1. The information presented in this report is based on the data provided by the client and the results of the field inspection. It is not intended to be a comprehensive assessment of the building's asbestos content. The results of this inspection should be used in conjunction with the results of the laboratory analysis of the samples collected during the inspection. 2. The results of this inspection are based on the visual inspection of the building's exterior and interior surfaces. The results of this inspection do not include the results of the laboratory analysis of the samples collected during the inspection. 3. The results of this inspection are based on the visual inspection of the building's exterior and interior surfaces. The results of this inspection do not include the results of the laboratory analysis of the samples collected during the inspection.							

Table 3.1.C  
Asbestos Containing Materials and Affected Building Component Systems

Greenhouses

Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Thermal Systems Insulation							
GH-2-04, 05	Thermal Systems Insulation	Greenhouse 3 Trench	10%-75% Chrysotile, 50% Amosite	TSI	Friable, accessible	Damaged	20 LF
		Greenhouse 4 Trench		TSI	Friable, accessible	Damaged	20 LF
		Greenhouse 5A/5B Trench		TSI	Friable, accessible	Damaged	70 LF
		Greenhouse 6 Trench		TSI	Friable, accessible	Damaged	120 LF
		Greenhouse 7 Trench		TSI	Friable, accessible	Damaged	70 LF
		Greenhouse 8 Trench		TSI	Friable, accessible	Damaged	20 LF
		Greenhouse 14 Trench		TSI	Friable, accessible	Damaged	20 LF
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Transite							
GH-5-01, GH-1-01, 02, GH-4- 04	Corrugated transite wall panel	Greenhouse 2	15%-35% Chrysotile	Misc.	Non-friable, Accessible	Intact	170 SF
		Greenhouse 9		Misc.	Non-friable, Accessible	Intact	140 SF
		Greenhouse 10		Misc.	Non-friable, Accessible	Intact	110 SF
		Greenhouse 11		Misc.	Non-friable, Accessible	Intact	225 SF
	Green or blue transite board	Greenhouse 13		Misc.	Non-friable, Accessible	Intact	14 SF
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Window Glazing Compound							
GH-1-03, 04, 05, GH- 2-01, GH-3- 01, 02, 03, GH-5-02, 03, 04, 05, 06, 07, Gh- 4-01, 02	Window glazing compound	Greenhouse 1-15	Trace-15% Chrysotile	Misc.	Non-friable, Accessible	Damaged	16,000 SF
Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
Adhesives and Sink							
GH-2-06	Caulking	Between Small Shed and Greenhouse	15% Chrysotile	Misc.	Non-friable, Accessible	Damaged	100 SF
05A, 05B	Black panel adhesive	Greenhouse 6	10% Chrysotile	Misc.	Non-friable, Accessible	Damaged	110 SF

06A, 06B	Yellow foam insulation adhesive	Greenhouse 13, Greenhouse 14, Greenhouse 15	5% Chrysotile	Misc.	Non-friable, Accessible	Intact	460 SF
GH- 03A, 03B	Sink Undercoat	Exterior Between Greenhouse 8 and Greenhouse 15	7%	Misc.	Non-friable, Accessible	Intact	5 SF

**Table 3.1.D**  
**Asbestos Containing Materials and Affected Building Component Systems**

**Corn Lab**

Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
<b>Corn Lab ACM</b>							
Corn Lab 01, 02, 1M, 2M	Gray with white streaks 9"x9" floor tile and associated mastic	Main room, entry and bathroom	15% Chrysotile	Misc.	Non-friable, Accessible	35 SF damaged	270 SF
Presumed	Stored transite board	Basement	Presumed	Misc.	Non-friable, Accessible	Intact	2 SF
Presumed	Stored corrugated transite panels	Exterior of Greenhouse	Presumed	Misc.	Non-friable, Accessible	Intact	2 Units, 30 SF Total
Corn Lab 12, Corn Lab 13	Door casing caulking	Front door and door leading to greenhouse	10% Chrysotile	Misc.	Non-friable, Accessible	Damaged	2 Doors
04A, 04B	Gray Sink Undercoating	Main room	10% Chrysotile	Misc.	Non-friable, Accessible	Intact	1 Unit
Presumed	Window glazing compound	Corn lab greenhouse	Presumed	Misc.	Non-friable, Accessible	Damaged	760 LF

**Table 3.1.E**  
**Asbestos Containing Materials and Affected Building Component Systems**

**Pesticide Shed Greenhouse**

Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
<b>Pesticide Shed Greenhouse ACM</b>							
PS -05, PS-06	Window Glazing Compound	Throughout	5% Chrysotile	Misc.	Non-friable, Accessible	Damaged	546 LF

**Table 3.1.F**  
**Asbestos Containing Materials and Affected Building Component Systems**

**Boiler House**

Field ID	Description	Location	Result	Material Class	Friability & Access	Condition Assessment	Est. Quantity
<b>Boiler House ACM</b>							
Boiler Bldg 04, 05	Door casing caulking	Throughout	5%-10% Chrysotile	Misc.	Non-friable, Accessible	Damaged	2 Units
Boiler Bldg 01, 02, 03, 06, 07, 08	Exterior window casing caulking and glazing compound	Throughout	2%-10% Chrysotile	Misc.	Non-friable, Accessible	Some Damaged	7 Units
Boiler Bldg 09	TSI roping around metal breeching connected to the smoke stack exterior	Exterior of the building	90% Chrysotile	TSI	Friable, Accessible	Damaged	20LF
B-01A, B-01B	Gaskets associated with steel boiler breaching	Boiler room	10% Chrysotile	TSI	Friable, Accessible	Intact	50 LF
Presumed	Insulation between steel walls of the incinerator, any other suspect components associated with the incinerator	Incinerator room	Presumed	TSI	Friable, Non-accessible	Intact	190 SF
Presumed	Stored boxes of floor tiles	Incinerator room	Presumed	Misc.	Non-friable, Accessible	Intact	2 boxes

**Table 3.1.G**  
**Suspect Materials With No Asbestos Detected**

**Administration Building**

Field ID	Description	Location
Admin- 09S, 09B, 10B, 10S, 11B, 11S, 29B, 29S, 30B, 30S, 42, 43, 45B, 45S, 57B, 57S, 58B, 58S	Plaster skim coat and plaster base coat	Admin. building throughout
Admin- 12, 13, 14, 44	Acoustical plaster (yellow and white)	Admin. building lobby area outside auditorium
Admin- 17, 26, 26M, 39, 41, 55, 56	Cove base mastic	Admin. building throughout
Admin- 27, 27M	Sound board mastic	Admin. building storage closet outside WCFO
Admin- 35, 53	Stone window sill (black)	Admin. building throughout
Admin- 36	Gray caulking between concrete and black stone window sill	Admin. building 2nd floor 4H kitchen
Admin- 37, 52, 62	Lab sink	Admin. building 2nd floor 4H kitchen, room 201 and 214
Admin- 51, 51M	Lab counter top transite like material	Admin. Building room 201
02A	Black Coating on Block Wall Behind Plaster	Admin Building/ 019 - Auditorium
02B	Black Coating on Block Wall Behind Plaster	Admin Building/ 019 - Auditorium
02C	Black Coating on Block Wall Behind Plaster	Admin Building/ 019 - Auditorium
03A	Yellow Carpet Mastic	Admin Building/ Room 122
03B	Yellow Carpet Matic	Admin Building/ Room 122
04A	Tan Cloth Vibration Dampener	Admin Building/ Room 205A
04B	Tan Cloth Vibration Dampener	Admin Building/ Room 126
05A	Stone Pattern Linoleum on Counter	Admin Building/ Room 012
05B	Stone Pattern Linoleum on Counter	Admin Building/ Room 012
06A	Gold Adhesive assoc. w/05A	Admin Building/ Room 012
06B	Gold Adhesive assoc. w/05B	Admin Building/ Room 012
09A	Black with White Streaks Counter Sheet Goods	Admin Building/ Room 201
09B	Black with White Streaks Counter Sheet Goods	Admin Building/ Room 201
10A	Silver Adhesive Associated with 09A	Admin Building/ Room 201
10B	Silver Adhesive Associated with 09B	Admin Building/ Room 201
11A	Gray Soundboard on Wall	Admin Building/ Room 09A
12A	Cream Adhesive Associated with 11A	Admin Building/ Room 09A

**Table 3.1.H**  
**Suspect Materials With No Asbestos Detected**

**Gray Building**

Field ID	Description	Location
Gray- 04, 40, 41	Lab sink	Gray building basement, 2nd floor room 203 and room 204 (large sink)
19A, 19B, Gray PM-01A	Pancling mastic (tan)	Gray building small storage room off large storage room
Gray- 02A, 08, 08P	Cork insulation and vapor barrier paper	Gray building Sub-basement, root cellar
21A, 22A, Gray-09, 09M	Beige 12"x12" floor tile w/ mastic	Gray Building 1st floor large room
03A, 04A, 05A, 05B, Gray- 12, 12P, 12M	Red and black linoleum w/ vapor paper and adhesive	Gray building room 105 office
14B, 14S, 15B, 15S, 16B, 16S, 29B, 29S, 30B, 30S, 31B, 31S	Base and skim plaster	Gray building throughout
Gray- 01, 02, 17, 18, 32, 33, 34	Sheetrock	Gray building throughout
17A, Gray-19	Mastic on styro-foam wall panels	Gray building 1st floor photo room
Gray- 03, 20, 35, 36, 37	Joint compound	Gray building basement, 1st floor hallway and 2nd floor
Gray-25	Rolled asphalt roof	Gray building
Gray-26	Roof flashing	Gray building
07A, 07B, Gray-46	Asphalt roof shingle	Gray building flat roof between gray building and greenhouse garage
06A, 06B	Black cork adhesive on wall	Gray building room 202
11A, 11B	Adhesive associated with black with white streaks counter sheet goods	Gray building room 105 and room 204

13A, 13B	Brown paper under wood siding	Gray building exterior south side
14A, 14B	Top layer tan paper under wood siding	Gray building exterior west side
15A, 15B	Bottom layer thin black paper under 14A, 14B	Gray building exterior west side
16A, 16B	Thick black paper under wood siding	Gray building exterior north side- garage exterior
20A, 20B	Black roof tar paper	Gray building roof
<p>Information Section: This table contains information included in Scope of Work.</p> <p>Any suspect materials described in this report will be presumed ACM until laboratory analysis otherwise.</p>		

**Table 3.1.I**  
**Suspect Materials With No Asbestos Detected**

**Greenhouses**

Field ID	Description	Location
GH-1/2 (01)	Rolled roofing	Greenhouse 1&2
GH-1/2 (02), GH-3/4(01), GH-5B(02)	Asphalt shingles	Greenhouses
GH-1/2(03)	Vapor barrier paper	Greenhouse 1&2 on floor
01A, 01B	Planter	Greenhouses
02A, 02B	Black Sink Undercoat	Greenhouse 9
04A, 04B	Yellow Panel Adhesive	Greenhouse 6
<p>Information Section: This table contains information included in Scope of Work.</p> <p>Any suspect materials described in this report will be presumed ACM until laboratory analysis otherwise.</p>		

**Table 3.1.J**  
**Suspect Materials With No Asbestos Detected**

**Corn Lab**

Field ID	Description	Location
Corn Lab-03B, 03S, 04B, 04S	Base and skim plaster	Corn Lab
Corn Lab- 05, 06, 07, 08, 09	Window glazing compound	Corn Lab
Corn Lab-10	Asphalt roof	Corn Lab
Corn Lab-11	Asphalt flashing	Corn Lab
01A, 01B	Residual Gray Felt Backing on Floor	1st Floor Small Room
02A, 02B	Adhesive Associated with 01A and 01B	2nd Floor Small Room
03A, 03B	Cloth Duct- Round	Corn Lab
<p>Information Section: This table contains information included in Scope of Work.</p> <p>Any suspect materials described in this report will be presumed ACM until laboratory analysis otherwise.</p>		

**Table 3.1.K**  
**Suspect Materials With No Asbestos Detected**

**Pesticide Shed**

Field ID	Description	Location
PS-02	Joint compound	Pesticide Shed
PS-03, 04, 06	Window glazing compound	Pesticide Shed
PS-07	Roof asphalt shingle	Pesticide Shed
<p>Information Section: This table contains information included in Scope of Work.</p> <p>Any suspect materials described in this report will be presumed ACM until laboratory analysis otherwise.</p>		

**Table 3.1.L**  
**Suspect Materials With No Asbestos Detected**

**Boiler House**

Field ID	Description	Location
BH-01A, BH-01B	Black wrap on fiberglass pipe insulation	Pipe chase
<p>Information Section: This table contains information included in Scope of Work.</p> <p>Any suspect materials described in this report will be presumed ACM until laboratory analysis otherwise.</p>		





# ProScience Analytical Services, Inc

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Eric Kubic  
Environmental Compliance Svcs Inc. HQ  
588 Silver Street  
Agawam, MA 01001

October 18, 2016

Dear Eric Kubic,

The enclosed analytical results have been obtained by using the EPA/600/R-93/116 method. The "Visual Estimate" quantitative method is generally used for determining the percentage of asbestos and other components of the sample. "The Point Counting" method may also be used upon client request or at the analyst discretion. The Point Count method is usually recommended when the sample contains less than 10% asbestos by Visual estimate. Asbestos content less than 1% is recorded on the report as TR (trace).

The Quality Control data related to the samples analyzed is available upon client's written request. ProScience Analytical Services Inc., assumes no responsibility for potential sample contamination that may have occurred during the sample collection process or erroneous data provided by the client.

The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.

All Laboratory records are retained for at least three years unless otherwise directed in writing by the client. The actual samples are retained for a period of two months and written request is necessary in order to be retained for a longer period of time. All analytical results and records are considered strictly confidential and will not be released under any circumstances to anyone except the actual client. The analytical results included in this report apply only to the items tested.

If you have any questions please contact the Laboratory Manager or the Laboratory Director.

Sincerely,

Patricia Weakley, Optical Asbestos Manager  
Aimee Cormier, Laboratory Director

Enclosure: Version 2  
LAB BATCH ID: B 102500 CLIENT PROJECT ID: N/A  
Client Ref: 240 Beaver St., Waltham, MA - Corn Lab & Boiler House  
AIHA ID# 102754; CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; ME ID# LA-056; NVLAP  
Lab Code 200090-0; RI ID # AAL-093; VT ID# AL016876

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: N/A  
 Client Reference: 240 Beaver St., Waltham, MA - Corn Lab & Boiler House  
 Method: EPA/600/R-93/116

Batch: **B102500**  
 Date Sampled: 10/7/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/17/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01A	Gray	0	0	0	0	0	0	0	0	90	TR	5	0	5
Description: Residual Felt Backing on Floor - Gray Location: 1st Floor, Small Room Comments:														
													Is asbestos present? No. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01B	Gray	0	0	0	0	0	0	0	0	90	TR	5	0	5
Description: Residual Felt Backing on Floor - Gray Location: 1st Floor, Small Room Comments:														
													Is asbestos present? No. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
02A	Black	0	0	0	0	0	0	0	0	TR	0	0	0	100
Description: Adhesive assoc. w/01A Location: 1st Floor, Small Room Comments:														
													Is asbestos present? No. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
02B	Black	0	0	0	0	0	0	0	0	TR	0	0	0	100
Description: Adhesive assoc. w/01B Location: 1st Floor, Small Room Comments:														
													Is asbestos present? No. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
03A	Tan	0	0	0	0	0	0	0	0	0	0	95	0	5
Description: Cloth Duct - Round Location: Shed Off Greenhouse Comments:														
													Is asbestos present? No. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
03B	Tan	0	0	0	0	0	0	0	0	0	0	95	0	5
Description: Cloth Duct - Round Location: Shed Off Greenhouse Comments:														
													Is asbestos present? No. Analyzed: Yes	

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: N/A  
 Client Reference: 240 Beaver St., Wallham, MA - Corn Lab & Boiler House  
 Method: EPA/600/R-93/116

Batch: B102500  
 Date Sampled: 10/7/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/17/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
04A	Gray	10	0	0	0	0	0	0	0	TR	0	0	0	90
Description: Gray Sink Undercoating Location: Main Room Comments:														
Is asbestos present? Yes. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
04B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description: Gray Sink Undercoating Location: Main Room Comments:														
Analyzed: No														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
B-01A	Yellow	10	0	0	0	0	0	0	0	0	0	0	0	90
Description: Yellow Material between Metal Boiler Breeching Flanges Location: Boiler House Comments:														
Is asbestos present? Yes. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
B-01B		0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Yellow Material between Metal Boiler Breeching Flanges Location: Boiler House Comments:														
Analyzed: No														

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite  
 Non-Asbestos Codes: FBG = Fiberglass MNW = Mineral Wool CEL = Cellulose HAR = Hair SYN = Synthetic OTH = Other NON = Non-Fibrous Minerals

Note: To create a unique lab sample ID, use the Batch # and the Sample ID (example: [Batch #] - [Sample ID]).

\* All results are in percentage.

Analyst: Robert West

*Patricia Wally For*

# ProScience Analytical Services, Inc.

## PLM Asbestos Chain of Custody Record

### LABORATORY/HEADQUARTERS

22 Cummings Park, Woburn, MA 01801  
T:781-935-3212 F:781-932-4857

☐ RUSH  
Turn Around Time Requested

☐ Same day ☐ 24 Hour ☐ 48 Hour ☒ 72 Hour ☐ 5 Days

Client: Environmental Compliance Services, Inc.

Address: 588 Silver Street, Agawam, MA 01001

Project Site: 270 Beaver St Waltham Ma.

Project #: Corn Lab 9

Phone Number: (413) 386-4774 Boilers House

Contact: Eric Kubic EKubic@ecsconsult.com

For Lab Use Batch # B102500

### Special Instructions:

Relinquished by date: 10/12/16

Received by date: 10/13/16 11:10

Samples received: 10

Fixed/E-mailed/Verbal by date: 10/13/16

Stop on first positive (Yes/No) No

FIM=Floor Tile & Mastic, Lm=Linoeum, Cm=Carpet Mastic, Plb=Plaster Base Coat, Pls=Plaster Skim Coat, Glz=Glaze  
Gyp=Gypsum Board, Jc=Joint Compound, ST=Ceiling Tile, CK=Caulk, Adh=Adhesive, Ppr=Paper, Rf=Roofing

Analyzed by date: 10/13/16

by date: 10/13/16

by date: 10/13/16

Sample ID	Date Sampled	Description/Location	% Asbestos	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
B1A	10/7/16	FT/M Lm Cm Plb/Pis Gyp/Jc CT CK Glz Adh Ppr Rf Description: Residential felt backing on floor gyp.	0	YNFY																					5
01B		Location: 1st fl. sm. Room FT/M Lm Cm Plb/Pis Gyp/Jc CT CK Glz Adh Ppr Rf Description: "	0	YNFY																					5
02A		Location: 1st fl. sm. Room FT/M Lm Cm Plb/Pis Gyp/Jc CT CK Glz Adh Ppr Rf Description: Adh assoc. w/01B	0	YNFY																					5
02B		Location: 1st fl. sm. Room FT/M Lm Cm Plb/Pis Gyp/Jc CT CK Glz Adh Ppr Rf Description: Adh assoc. w/01B	0	YNFY																					5
03A		Location: Sked off Greenhouse FT/M Lm Cm Plb/Pis Gyp/Jc CT CK Glz Adh Ppr Rf Description: "	0	YNFY																					5
03B		Location: 1st fl. sm. Room FT/M Lm Cm Plb/Pis Gyp/Jc CT CK Glz Adh Ppr Rf Description: "	0	YNFY																					5

Corn Lab & Boiler House. B102500

Sample ID	Date Sampled	Description/Location	% Asbestos	Microscopic Analysis										Polarized Light Microscopy (PLM)										Infrared Spectroscopy (IR)									
				Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous								
044	10/7/12	Location: Main Room. Description: grey sink undercoating. FT/M Lm Cm Pib/Pis Gyp/Jc Ct Ck Gtz Adh Ppr Rt	0	Grey	Homogeneous	Smooth	Friable	WLL + L	Extinction	Sign of Elongation	Birefringence	Pleochroism	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous								
043	10/7/12	Location: DNT Description: FT/M Lm Cm Pib/Pis Gyp/Jc Ct Ck Gtz Adh Ppr Rt																															
B-01A	10/7/12	Location: Boiler House. Description: yellow material between metal beam bracing flanges. FT/M Lm Cm Pib/Pis Gyp/Jc Ct Ck Gtz Adh Ppr Rt	0	Yellow	Homogeneous	Smooth	Friable	WLL + L	Extinction	Sign of Elongation	Birefringence	Pleochroism	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous								
B-01B	10/7/12	Location: Boiler House. Description: FT/M Lm Cm Pib/Pis Gyp/Jc Ct Ck Gtz Adh Ppr Rt	0	Grey	Homogeneous	Smooth	Friable	WLL + L	Extinction	Sign of Elongation	Birefringence	Pleochroism	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous								

Date: 10/15/16  
Page: 2



# ProScience Analytical Services, Inc

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Eric Kubic  
Environmental Compliance Svcs Inc. HQ  
588 Silver Street  
Agawam, MA 01001

October 18, 2016

Dear Eric Kubic,

The enclosed analytical results have been obtained by using the EPA/600/R-93/116 method. The "Visual Estimate" quantitative method is generally used for determining the percentage of asbestos and other components of the sample. "The Point Counting" method may also be used upon client request or at the analyst discretion. The Point Count method is usually recommended when the sample contains less than 10% asbestos by Visual estimate. Asbestos content less than 1% is recorded on the report as TR (trace).

The Quality Control data related to the samples analyzed is available upon client's written request. ProScience Analytical Services Inc., assumes no responsibility for potential sample contamination that may have occurred during the sample collection process or erroneous data provided by the client.

The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.

All Laboratory records are retained for at least three years unless otherwise directed in writing by the client. The actual samples are retained for a period of two months and written request is necessary in order to be retained for a longer period of time. All analytical results and records are considered strictly confidential and will not be released under any circumstances to anyone except the actual client. The analytical results included in this report apply only to the items tested.

If you have any questions please contact the Laboratory Manager or the Laboratory Director.

Sincerely,

Patricia Weakley, Optical Asbestos Manager  
Aimee Cormier, Laboratory Director

Enclosure: Version 2  
LAB BATCH ID: B 102502 CLIENT PROJECT ID: 01-207319.07.43  
Client Ref: 240 Beaver St., Waltham, MA - Greenhouses  
AIHA ID# 102754; CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; ME ID# LA-056; NVLAP  
Lab Code 200090-0; RI ID # AAL-093; VT ID# AL016876

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Greenhouses  
 Method: EPA/600/R-93/116

Batch: B102502  
 Date Sampled: 10/7/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/18/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01A	Gray	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Planter Location: GH-1 Comments:														
Is asbestos present? No.													Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01B	Gray	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Planter Location: GH-15 Comments:														
Is asbestos present? No.													Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
02A	Multi	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Black Sink Location: GH-9 Comments:														
Is asbestos present? No.													Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
02B	Multi	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Black Sink Location: GH-9 Comments:														
Is asbestos present? No.													Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
03A	Black	7	0	0	0	0	0	0	0	0	0	0	0	93
Description: Black Sink Location: Exterior of GH-1 Comments:														
Is asbestos present? Yes.													Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
03B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description: Black Sink Location: Exterior of GH-1 Comments:														
													Analyzed: No	

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Greenhouses  
 Method: EPA/600/R-93/116

Batch: B102502  
 Date Sampled: 10/7/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/18/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
04A	Yellow	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Yellow Panel Adhesive Location: GH-6 Comments:														
Is asbestos present? No.													Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
04B	Yellow	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Yellow Panel Adhesive Location: GH-6 Comments:														
Is asbestos present? No.													Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
05A	Black	10	0	0	0	0	0	0	0	0	0	0	0	90
Description: Black Panel Adhesive Location: 05A Comments:														
Is asbestos present? Yes.													Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
05B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description: Black Panel Adhesive Location: 05B Comments:														
													Analyzed: No	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
06A	Brown	8	0	0	0	0	0	0	0	0	0	0	0	92
Description: Brown Wall Foam Adhesive Location: GH-15 Comments:														
Is asbestos present? Yes.													Analyzed: Yes	

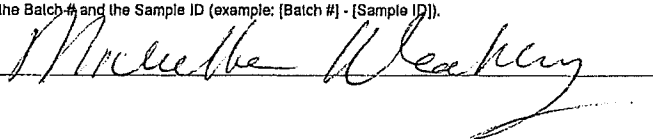
Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
06B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description: Brown Wall Foam Adhesive Location: GH-15 Comments:														
													Analyzed: No	

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite  
 Non-Asbestos Codes: FBG = Fiberglass MNW = Mineral Wool CEL = Cellulose HAR = Hair SYN = Synthetic OTH = Other NON = Non-Fibrous Minerals

Note: To create a unique lab sample ID, use the Batch # and the Sample ID (example: [Batch #] - [Sample ID]).

\* All results are in percentage.

Analyst: Michelle Weakley





# ProScience Analytical Services, Inc.

## PLM Asbestos Chain of Custody Record

### LABORATORY/HEADQUARTERS

22 Cummings Park, Woburn, MA 01801  
T: 781-935-3212 F: 781-932-4857

Turn Around Time Requested

☐ RUSH

☐ Same day ☐ 24 Hour ☐ 48 Hour ☒ 72 Hour ☐ 5 Days

Client: Environmental Compliance Services, Inc.

Address: 588 Silver Street, Agawam, MA 01001

Project Site: 240 Beaver St. Waltham, MA

Project #: 01-202319, 07.73 Greenhouses

Phone Number: (413) 386-4774

Contact: Eric Kubie Ekubie@ecsconsult.com

### Special Instructions:

Relinquished by/date: 10/12/16  
Received by/date: 10/13/16  
Samples received: 12  
Analyzed: 10/13/16  
Fixed/E-mailed/Verbal by/date: 10/13/16  
Stop on first positive Yes/No

For Lab Use Batch #

B102502

Sample ID	Date Sampled	Description/Location	Analyzed by/date: M. Kubic 10/13/16									
			Stereo Scope		Optical Properties		Asbestos Percentage (%)		Non Asbestos Percentage (%)			
			% Asbestos	Color	Homogeneity	Texture	Frangible	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism
01A	10/7/16	Location: GH-1 Description: Plaster	0	Gray	Homogeneous	Granular	Yes	Amorphous	Extinct	None	None	None
01B	10/7/16	Location: GH-15 Description: Plaster	0	Gray	Homogeneous	Granular	Yes	Amorphous	Extinct	None	None	None
02A	10/7/16	Location: GH-9 Description: Plaster	0	Gray	Homogeneous	Granular	Yes	Amorphous	Extinct	None	None	None
02B	10/7/16	Location: GH-9 Description: Plaster	0	Gray	Homogeneous	Granular	Yes	Amorphous	Extinct	None	None	None
03A	10/7/16	Location: GH-1 Description: Plaster	0	Gray	Homogeneous	Granular	Yes	Amorphous	Extinct	None	None	None
03B	10/7/16	Location: GH-1 Description: Plaster	0	Gray	Homogeneous	Granular	Yes	Amorphous	Extinct	None	None	None

240 Beaver Street - Maltham Ma.

Green houses.

B102502

Sample ID	Date Sampled	Description/Location	% Asbestos	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	=	⊥	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
0413	10/7/16	Location: 6-H-6 Description: yellow Panel Adh. FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck GIZ Adh Ppr Rt	0	Y	10H	Y																					100
0413	10/7/16	Location: 6-H-6 Description: Black Panel Adh. FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck GIZ Adh Ppr Rt	0	Y	10H	Y																					100
0513	10/7/16	Location: 05-9 Description: Brown wall foam adh FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck GIZ Adh Ppr Rt	0	Y	10H	Y																					90
0613	10/7/16	Location: 6-H-15 Description: Brown wall foam adh FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck GIZ Adh Ppr Rt	0	Y	10H	Y																					90
0613	10/7/16	Location: 6-H-15 Description: Brown wall foam adh FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck GIZ Adh Ppr Rt	0	Y	10H	Y																					90



# ProScience Analytical Services, Inc

---

Eric Kubic  
Environmental Compliance Svcs Inc. HQ  
588 Silver Street  
Agawam, MA 01001

October 18, 2016

Dear Eric Kubic,

The enclosed analytical results have been obtained by using the EPA/600/R-93/116 method. The "Visual Estimate" quantitative method is generally used for determining the percentage of asbestos and other components of the sample. "The Point Counting" method may also be used upon client request or at the analyst discretion. The Point Count method is usually recommended when the sample contains less than 10% asbestos by Visual estimate. Asbestos content less than 1% is recorded on the report as TR (trace).

The Quality Control data related to the samples analyzed is available upon client's written request. ProScience Analytical Services Inc., assumes no responsibility for potential sample contamination that may have occurred during the sample collection process or erroneous data provided by the client.

The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.

All Laboratory records are retained for at least three years unless otherwise directed in writing by the client. The actual samples are retained for a period of two months and written request is necessary in order to be retained for a longer period of time. All analytical results and records are considered strictly confidential and will not be released under any circumstances to anyone except the actual client. The analytical results included in this report apply only to the items tested.

If you have any questions please contact the Laboratory Manager or the Laboratory Director.

Sincerely,

Patricia Weakley, Optical Asbestos Manager  
Aimee Cormier, Laboratory Director

Enclosure: Version 2  
LAB BATCH ID: B 102506 CLIENT PROJECT ID: 01-207319.07.43  
Client Ref: 240 Beaver St., Waltham, MA - Admin. Building  
AIHA ID# 102754; CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; ME ID# LA-056; NVLAP  
Lab Code 200090-0; RI ID # AAL-093; VT ID# AL016876

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Admin. Building  
 Method: EPA/600/R-93/116

Batch: B102506  
 Date Sampled: 10/11/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/17/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01A	Brown	10	0	0	0	0	0	0	0	0	0	0	0	90
Description: Brown Stick Pin Adhesive on Metal Ductwork Location: 019 - Auditorium Comments: <span style="float: right;">Is asbestos present? Yes. Analyzed: Yes</span>														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description: Brown Stick Pin Adhesive on Metal Ductwork Location: 019 - Auditorium Comments: <span style="float: right;">Analyzed: No</span>														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
02A	Black	0	0	0	0	0	0	0	0	TR	0	0	0	100
Description: Black Coating on Block Wall behind Plaster Location: 019 - Auditorium Comments: <span style="float: right;">Is asbestos present? No. Analyzed: Yes</span>														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
02B	Black	0	0	0	0	0	0	0	0	TR	0	0	0	100
Description: Black Coating on Block Wall behind Plaster Location: 019 - Auditorium Comments: <span style="float: right;">Is asbestos present? No. Analyzed: Yes</span>														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
02C	Black	0	0	0	0	0	0	0	0	TR	TR	0	0	100
Description: Black Coating on Block Wall behind Plaster Location: 019 - Auditorium Comments: <span style="float: right;">Is asbestos present? No. Analyzed: Yes</span>														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
03A	Yellow	0	0	0	0	0	0	0	0	TR	0	TR	0	100
Description: Yellow Carpet Mastic Location: Room 122 Comments: <span style="float: right;">Is asbestos present? No. Analyzed: Yes</span>														

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Admin. Building  
 Method: EPA/600/R-93/116

Batch: B102506  
 Date Sampled: 10/11/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/17/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
03B	Yellow	0	0	0	0	0	0	0	0	TR	0	TR	0	100
Description: Yellow Carpet Matic Location: Room 122 Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
04A	Tan	0	0	0	0	0	0	0	0	95	0	0	0	5
Description: Tan Cloth Vibration Dampener Location: Room 205A Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
04B	Tan	0	0	0	0	0	0	0	0	95	0	0	0	5
Description: Tan Cloth Vibration Dampener Location: Room 126 Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
05A	Multi	0	0	0	0	0	0	0	0	30	0	0	0	70
Description: Stone Pattern Linoleum on Counter Location: Room 012 Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
05B	Multi	0	0	0	0	0	0	0	0	30	0	0	0	70
Description: Stone Pattern Linoleum on Counter Location: Room 012 Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
06A	Yellow	0	0	0	0	0	0	0	0	TR	0	0	0	100
Description: Gold Adhesive assoc. w/05A Location: Room 012 Comments:														
Is asbestos present? No. Analyzed: Yes														

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Admin. Building  
 Method: EPA/600/R-93/116

Batch: **B102506**  
 Date Sampled: 10/11/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/17/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
06B	Yellow	0	0	0	0	0	0	0	0	TR	0	0	0	100
Description: Gold Adhesive assoc. w/05B Location: Room 012 Comments:														
													Is asbestos present? No. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
07A	Gray	20	0	0	0	0	0	0	0	10	0	0	0	70
Description: Square Pattern Linoleum on Counter Location: Room 101 Comments:														
													Is asbestos present? Yes. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
07B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description: Square Pattern Linoleum on Counter Location: Room 101 Comments:														
													Analyzed: No	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
08A	Brown	TR	0	0	0	0	0	0	0	TR	0	0	0	100
Description: Brown Adhesive assoc. w/07A Location: Room 101 Comments:														
													Is asbestos present? Yes. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
08B	Brown	TR	0	0	0	0	0	0	0	TR	0	0	0	100
Description: Brown Adhesive assoc. w/07B Location: Room 101 Comments:														
													Is asbestos present? Yes. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
09A	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Black w/White Streaks Counter Sheet Goods Location: Room 201 Comments:														
													Is asbestos present? No. Analyzed: Yes	

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Admin. Building  
 Method: EPA/600/R-93/116

Batch: B102506  
 Date Sampled: 10/11/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/17/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
09B	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Black w/White Streaks Counter Sheet Goods Location: Room 201 Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
10A	Silver	0	0	0	0	0	0	0	0	TR	0	0	0	100
Description: Silver Adhesive assoc. w/09A Location: Room 201 Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
10B	Silver	0	0	0	0	0	0	0	0	TR	0	0	0	100
Description: Silver Adhesive assoc. w/09B Location: Room 201 Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
11A	Gray	0	0	0	0	0	0	0	0	95	0	0	0	5
Description: Gray Soundboard on Wall Location: Room 09A Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
12A	Yellow	0	0	0	0	0	0	0	0	TR	0	0	0	100
Description: Cream Adhesive assoc. w/11A Location: Room 09A Comments:														
Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
13A	Black	10	0	0	0	0	0	0	0	TR	0	0	0	90
Description: Black Soundboard Adhesive Location: Room 202 Comments:														
Is asbestos present? Yes. Analyzed: Yes														

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Admin. Building  
 Method: EPA/600/R-93/116

**Batch:** B102506  
 Date Sampled: 10/11/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/17/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
13B		0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Black Soundboard Adhesive Location: Room 09A (Patch) Comments:														
														Analyzed: No

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite  
 Non-Asbestos Codes: FBG = Fiberglass MNW = Mineral Wool CEL = Cellulose HAR = Hair SYN = Synthetic OTH = Other NON = Non-Fibrous Minerals

Note: To create a unique lab sample ID, use the Batch # and the Sample ID (example: [Batch #] - [Sample ID]).

\* All results are in percentage.

Analyst: Robert West  For:





B102504

[illegible]

240 Beaver Street - Waltham Ma.

Admin Building

B102506

Sample ID	Date Sampled	Description/Location	% Asbestos	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
0813	10/11/16	Location: RM 101 Description: Brown Ash Assoc w/0113 FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr Rt	0	BRN	RN			WLLTLN																	100
09A		Location: RM 201 Description: 11 FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr Rt	0	BRN	RN																				100
09B		Location: RM 201 Description: Silver Ash Assoc w/09A FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr Rt	0	BRN	RN																				100
10A		Location: RM 201 Description: Silver Ash Assoc w/09B FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr Rt	0	BRN	RN																				100
10B		Location: RM 201 Description: Grey Soudboard on wall FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr Rt	0	BRN	RN																				100
11A		Location: RM 09A Description: Cream ash assoc w/11A FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr Rt	0	BRN	RN																				5
12A		Location: RM 09A Description: Black Soudboard Ash FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr Rt	0	BRN	RN																				100
13A		Location: RM 202 Description: Black Soudboard Ash FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr Rt	0	BRN	RN																				20
13B		Location: RM 09A (Petal) Description: DNE FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr Rt																							

Com

Birefringence L= less than .010, M= .011-.029, H= greater than .03: Microscope Olympus E

Serial # circle 1-242277, 229027, 235000, 230663

Relinquished By:

*[Signature]*

Date:

10/11/16

Page 3



# ProScience Analytical Services, Inc

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Eric Kubic  
Environmental Compliance Svcs Inc. HQ  
588 Silver Street  
Agawam, MA 01001

October 18, 2016

Dear Eric Kubic,

The enclosed analytical results have been obtained by using the EPA/600/R-93/116 method. The "Visual Estimate" quantitative method is generally used for determining the percentage of asbestos and other components of the sample. "The Point Counting" method may also be used upon client request or at the analyst discretion. The Point Count method is usually recommended when the sample contains less than 10% asbestos by Visual estimate. Asbestos content less than 1% is recorded on the report as TR (trace).

The Quality Control data related to the samples analyzed is available upon client's written request. ProScience Analytical Services Inc., assumes no responsibility for potential sample contamination that may have occurred during the sample collection process or erroneous data provided by the client.

The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.

All Laboratory records are retained for at least three years unless otherwise directed in writing by the client. The actual samples are retained for a period of two months and written request is necessary in order to be retained for a longer period of time. All analytical results and records are considered strictly confidential and will not be released under any circumstances to anyone except the actual client. The analytical results included in this report apply only to the items tested.

If you have any questions please contact the Laboratory Manager or the Laboratory Director.

Sincerely,

Patricia Weakley, Optical Asbestos Manager  
Aimee Cormier, Laboratory Director

Enclosure: Version 2  
LAB BATCH ID: B 102507 CLIENT PROJECT ID: 01-207319.07.43  
Client Ref: 240 Beaver St., Waltham, MA - Gray Building  
AIHA ID# 102754; CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; ME ID# LA-056; NVLAP  
Lab Code 200090-0; RI ID # AAL-093; VT ID# AL016876

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Gray Building  
 Method: EPA/600/R-93/116

Batch: B102507  
 Date Sampled: 10/6/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/18/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
01A	Gray	TR	0	0	0	0	0	0	0	0	0	0	0	100
Description: Cementitious Coating over Cork Location: Sub-Basement Cooler Comments: Is asbestos present? Yes. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
02A	Brown	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Cork associated w/01A Location: Sub-Basement Cooler Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
03A	Red	0	0	0	0	0	0	0	0	18	0	2	0	80
Description: Red & Black Sheet Flooring Location: Room Adjacent to 105 Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
04A	Gray	0	0	0	0	0	0	0	0	75	0	0	0	25
Description: Gray Vapor Paper associated w/03A Location: Room Adjacent to 105 Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
05A	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Black/Brown Adhesive associated w/03A Location: Room Adjacent to 105 Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
05B	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Black/Brown Adhesive associated w/03A Location: Room Adjacent to 105 Comments: Is asbestos present? No. Analyzed: Yes														

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Gray Building  
 Method: EPA/600/R-93/116

Batch: B102507  
 Date Sampled: 10/6/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/18/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
06A	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Black Cork Adhesive on Wall														
Location: Room 202														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
06B	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Black Cork Adhesive on Wall														
Location: Room 202														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
07A	Black	0	0	0	0	0	0	15	0	0	0	0	0	85
Description: Asphalt Roof Shingle														
Location: Garage Roof														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
07B	Black	0	0	0	0	0	0	15	0	0	0	0	0	85
Description: Asphalt Roof Shingle														
Location: Garage Roof														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
08A	White	TR	0	0	0	0	0	0	0	0	0	0	0	100
Description: Decorative Plaster Ceiling														
Location: 1st Floor Large Storage Room														
Comments: Is asbestos present? Yes. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
08B	White	TR	0	0	0	0	0	0	0	0	0	0	0	100
Description: Decorative Plaster Ceiling														
Location: Room 203														
Comments: Is asbestos present? Yes. Analyzed: Yes														

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Gray Building  
 Method: EPA/600/R-93/116

Batch: B102507  
 Date Sampled: 10/6/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/18/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
08C	White	TR	0	0	0	0	0	0	0	0	0	0	0	100
Description: Decorative Plaster Ceiling Location: Room 204 Comments: Is asbestos present? Yes. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
09A	White	5	0	0	0	0	0	0	0	0	0	0	0	95
Description: White Sink Undercoating Location: Room 105 Comments: Is asbestos present? Yes. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
09B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description: White Sink Undercoating Location: Room 105 Comments: Analyzed: No														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
10A	Black	3	0	0	0	0	0	0	0	0	0	0	0	97
Description: Black w/White Streaks Counter Sheet Goods Location: Room 204 Comments: Is asbestos present? Yes. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
10B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description: Black w/White Streaks Counter Sheet Goods Location: Room 105 Comments: Analyzed: No														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
11A	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Adhesive associated w/10A Location: Room 204 Comments: Is asbestos present? No. Analyzed: Yes														

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Gray Building  
 Method: EPA/600/R-93/116

**Batch:** B102507  
 Date Sampled: 10/6/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/18/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
11B	Black	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Adhesive associated w/10B														
Location: Room 105														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
12A	Black	3	0	0	0	0	0	0	0	0	0	0	0	97
Description: Ext. WCC Location: Garage Comments: <div>Is asbestos present? Yes. Analyzed: Yes</div>														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
12B		0	0	0	0	0	0	0	0	0	0	0	0	0
Description: Ext. WCC Location: Garage Comments: Analyzed: No														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
13A	Brown	0	0	0	0	0	0	0	0	75	0	0	0	25
Description: Brown Paper under Wood Siding														
Location: Ext. South Side														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
13B	Brown	0	0	0	0	0	0	0	0	75	0	0	0	25
Description: Brown Paper under Wood Siding														
Location: Ext. South Side														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
14A	Tan	0	0	0	0	0	0	0	0	90	0	0	0	10
Description: Top Layer Tan Paper under Wood Siding														
Location: Ext. West Side														
Comments: Is asbestos present? No. Analyzed: Yes														



# ProScience Analytical Services, Inc.

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 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Gray Building  
 Method: EPA/600/R-93/116

**Batch:** B102507  
 Date Sampled: 10/6/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/18/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
14B	Tan	0	0	0	0	0	0	0	0	90	0	0	0	10
Description: Top Layer Tan Paper under Wood Siding Location: Ext. West Side Comments:														
													Is asbestos present? No. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
15A	Black	0	0	0	0	0	0	0	0	75	0	0	0	25
Description: Bottom Layer Thin Black Paper under 14A Location: Ext. West Side Comments:														
													Is asbestos present? No. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
15B	Black	0	0	0	0	0	0	0	0	75	0	0	0	25
Description: Bottom Layer Thin Black Paper under 14B Location: Ext. West Side Comments:														
													Is asbestos present? No. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
16A	Black	0	0	0	0	0	0	0	0	75	0	0	0	25
Description: Thick Black Paper under Wood Siding Location: North Side - Garage Ext. Comments:														
													Is asbestos present? No. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
16B	Black	0	0	0	0	0	0	0	0	75	0	0	0	25
Description: Thick Black Paper under Wood Siding Location: North Side - Garage Ext. Comments:														
													Is asbestos present? No. Analyzed: Yes	

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
17A	Brown	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Brown/Black Styrofoam Adhesive Location: 1st Floor Photo Room Comments: Recommend TEM Analysis.														
													Is asbestos present? No. Analyzed: Yes	

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Gray Building  
 Method: EPA/600/R-93/116

Batch: B102507  
 Date Sampled: 10/6/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/18/2016  
 Date of Report: 10/18/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
18A	Brown	2	0	0	0	0	0	0	0	0	0	0	0	98
Description: Brown Faux Tile Adhesive behind Sink Splash Guard														
Location: Basement														
Comments: Is asbestos present? Yes. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
19A	Tan	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Tan Wall Paneling Adhesive														
Location: 1st Floor Small Storage Room														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
19B	Tan	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Tan Wall Paneling Adhesive														
Location: 1st Floor Small Storage Room														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
20A	Black	0	0	0	0	0	0	0	0	75	0	0	0	25
Description: Black Roof Tar Paper														
Location: Main Building														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
20B	Black	0	0	0	0	0	0	0	0	75	0	0	0	25
Description: Black Roof Tar Paper														
Location: Main Building														
Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
21A	Beige	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: 12x12 Beige Floor Tile														
Location: Large Storage Room 1st Floor														
Comments: Is asbestos present? No. Analyzed: Yes														

# ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver St., Waltham, MA - Gray Building  
 Method: EPA/600/R-93/116

Batch: B102507  
 Date Sampled: 10/6/2016  
 Date Received: 10/13/2016  
 Date Analyzed: 10/18/2016  
 Date of Report: 10/18/2016

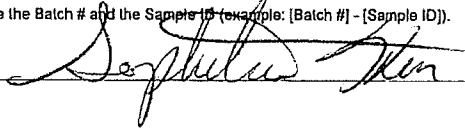
Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
22A	Yellow	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Yellow Floor Tile Mastic associated w/21A														
Location: Large Storage Room 1st Floor														
Comments: Is asbestos present? No. Analyzed: Yes														

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite  
 Non-Asbestos Codes: FBG = Fiberglass MNW = Mineral Wool CEL = Cellulose HAR = Hair SYN = Synthetic OTH = Other NON = Non-Fibrous Minerals

Note: To create a unique lab sample ID, use the Batch # and the Sample ID (example: [Batch #] - [Sample ID]).

\* All results are in percentage.

Analyst: Sophetra Ken



# ProScience Analytical Services, Inc.

## PLM Asbestos Chain of Custody Record

LABORATORY/HEADQUARTERS

22 Cummings Park, Woburn, MA 01801  
T: 781-935-3212 F: 781-932-4857

☐ RUSH

Turn Around Time Requested

☐ Same day ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 5 Days

Client: Environmental Compliance Services, Inc.

Address: 588 Silver Street, Agawam, MA 01001

Project Site: 240 Beaver St., Waltham, MA

Project #: 01-202319.07.73 2nd Floor

Phone Number: (413) 386-4774

Contact: Eric Kudic Ekubic@eecsconsult.com

Special Instructions:

Relinquished by/date:

Received by/date: Donna Durney 10/12/16

Samples received: 37 Analyzed: 10/13/16 @ 11:10

Failed/E-mailed/Vernal by/date:

Stop on first positive (Yes/No)

For Lab Use Batch # B102507

FUM=Floor Tile & Mastic, LM=Limestone, CM=Carpet Mastic, Plb=Plaster Base Coat, Pls=Plaster Skim Coat, Glz=Glaze  
Gyp=Gypsum Board, Jc=Joint Compound, CT=Ceiling Tile, CK=Caulk, Adh=Adhesive, Ppr=Paper, R=Roofing

Analyzed by/date: Eric Kudic 10/17/16

by/date: Michelle H. Kudic 10/18/16

Sample ID	Date Sampled	Description/Location	% Asbestos	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Asbestos Percentage (%)	Non Asbestos Percentage (%)
01A	10/6/16	Location: 2nd Floor - Corridor Description: Cementitious Ceiling over Corridor	0	Gray	Yes	Grainy	Yes	None	None	None	None	None	1.53	100	0
02A		Location: 1st Floor Description: Red & Black Sheet Floorings	0	Gray	Yes	Grainy	Yes	None	None	None	None	None	1.53	100	0
03A		Location: 1st Floor Description: Red & Black Sheet Floorings	0	Gray	Yes	Grainy	Yes	None	None	None	None	None	1.53	100	0
04A		Location: 1st Floor Description: Gray Vinyl Tiles	0	Gray	Yes	Grainy	Yes	None	None	None	None	None	1.53	100	0
05A		Location: 1st Floor Description: Black/Brown Adh. Assoc. w/ 03A	0	Gray	Yes	Grainy	Yes	None	None	None	None	None	1.53	100	0
05B		Location: 1st Floor Description: Red & Black Sheet Floorings	0	Gray	Yes	Grainy	Yes	None	None	None	None	None	1.53	100	0

240 Beaver Street - Walham Ma.

Gray Building

B102507

Sample ID	Date Sampled	Description/Location	% Asbestos	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism		⊥	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
06A	10/6/16	Location: RM 202 Description: Black cork wall on wall FT/M Lm Cm Pib/Pis Gyp/Jc CT CK GIZ Adh Ppr Rf	Ø	BK	✓	GN	N														I					100	
06B		Location: RM 202 Description: Appl'dt Root Stringe FT/M Lm Cm Pib/Pis Gyp/Jc CT CK GIZ Adh Ppr Rf	Ø	BK	✓	GN	N														I					100	
07A		Location: Garage Root Description: " FT/M Lm Cm Pib/Pis Gyp/Jc CT CK GIZ Adh Ppr Rf	Ø	BK	✓	GN	N														I					85	
07B		Location: " Description: " FT/M Lm Cm Pib/Pis Gyp/Jc CT CK GIZ Adh Ppr Rf	Ø	BK	✓	GN	N														I					85	
08A		Location: 1st fl 2g storage Rm Description: Decorative Plaster Ceiling FT/M Lm Cm Pib/Pis Gyp/Jc CT CK GIZ Adh Ppr Rf	Ø	WH	✓	GN	N																			100	
08B		Location: RM 203 Description: " FT/M Lm Cm Pib/Pis Gyp/Jc CT CK GIZ Adh Ppr Rf	Ø	WH	✓	GN	N																			100	
08C		Location: RM 204 Description: " FT/M Lm Cm Pib/Pis Gyp/Jc CT CK GIZ Adh Ppr Rf	Ø	WH	✓	GN	N																			100	
09A		Location: RM 105 Description: White sink under vanity FT/M Lm Cm Pib/Pis Gyp/Jc CT CK GIZ Adh Ppr Rf	5	WH	✓	GN	N																			95%	
09B		Location: " Description: " FT/M Lm Cm Pib/Pis Gyp/Jc CT CK GIZ Adh Ppr Rf																									
10A	✓	Location: RM 204 Description: Black w/white streaks down stairwell FT/M Lm Cm Pib/Pis Gyp/Jc CT CK GIZ Adh Ppr Rf	Ø	BK	✓	GN	N																			92	

240 Beaver Street - Walham Ma.

Gray Building

B102507

Sample ID	Date Sampled	Description/Location	% Asbestos	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism		⊥	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
10B	10/6/11	Location: Rm 105 DWA Description: Ash Assoc w/ 10A																									
11A		Location: Description: Ash Assoc w/ 10B																									
11B		Location: Description: ext w/c																									
12A		Location: Garage Description: ext w/c	3%																								
12B		Location: Garage Description: ext w/c																									
13A		Location: ext - South Side Description: ext w/c																									
13B		Location: Description: ext w/c																									
14A		Location: ext - North Side Description: ext w/c																									
14B		Location: Description: ext w/c																									
15A		Location: Description: ext w/c																									

*[Signature]*

240 Beaver Street - Walham Ma. Gray Building B102507

Sample ID	Date Sampled	Description/Location	% Asbestos	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism		⊥	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
15B	10/6/16	Location: FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr RT Description: " "	Ø	Bk	N	N	N															4B	75			25	
16A		Location: FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr RT Description: Thick Black Paper under wood graining Location: North Side Garage - Ext. FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr RT Description: " "	Ø	Bk	N	N	N															4B	75			25	
16B		Location: FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr RT Description: Brown/Black Styrofoam Adh.	Ø	Bk	N	N	N															4B	75			25	
17A		Location: 1st Fl Photo Room FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr RT Description: Brown paper file box behind sink splash guard.	Ø	Bk	N	N	N																			100	
18A		Location: Basement FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr RT Description: Tan wall Remodeling Adh	Ø	Bk	N	N	N																			98	
19A		Location: 1st Fl. Sin. Storage Rm. FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr RT Description: " "	Ø	Bk	N	N	N																			100	
19B		Location: FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr RT Description: Black Knot hair Paper	Ø	Bk	N	N	N																			100	
20A		Location: Main Bldg. FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr RT Description: " "	Ø	Bk	N	N	N																			25	
20B		Location: FT/M Lm Cm Plb/Pis Gyp/Jc CT CK GIZ Adh Ppr RT Description: Beige 12x12	Ø	Bk	N	N	N																			25	
21A	✓	Location: 49 Stenose Rm. 1st Fl. Description: Beige 12x12	Ø	Bk	N	N	N																			100	

\* Recommend TEM Analysis

240 Beaver Street - Waltham Ma.

Gray Building

3102507

Sample ID	Date Sampled	Description/Location	% Asbestos	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism		⊥	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
22A	10/6/12	Location: 11 Description: 4 yellowish brown 4 5's etc in 1 FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck Glz Adh Ppr Rt	0	Yellowish Brown	Homogeneous	Granular	Non Friable	Amorphous																			
		Location: Description: FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck Glz Adh Ppr Rt																									
		Location: Description: FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck Glz Adh Ppr Rt																									
		Location: Description: FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck Glz Adh Ppr Rt																									
		Location: Description: FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck Glz Adh Ppr Rt																									
		Location: Description: FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck Glz Adh Ppr Rt																									
		Location: Description: FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck Glz Adh Ppr Rt																									
		Location: Description: FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck Glz Adh Ppr Rt																									
		Location: Description: FT/M Lm Cm Plb/Pls Gyp/Jc Ct Ck Glz Adh Ppr Rt																									





# ProScience Analytical Services, Inc

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Eric Kubic  
ATC Group Services LLC - Agawam  
588 Silver Street  
Agawam, MA 01001

October 31, 2016

Dear Eric Kubic,

The enclosed analytical results have been obtained by using the EPA/600/R-93/116 method. The "Visual Estimate" quantitative method is generally used for determining the percentage of asbestos and other components of the sample. "The Point Counting" method may also be used upon client request or at the analyst discretion. The Point Count method is usually recommended when the sample contains less than 10% asbestos by Visual estimate. Asbestos content less than 1% is recorded on the report as TR (trace).

The Quality Control data related to the samples analyzed is available upon client's written request. ProScience Analytical Services Inc., assumes no responsibility for potential sample contamination that may have occurred during the sample collection process or erroneous data provided by the client.

The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.

All Laboratory records are retained for at least three years unless otherwise directed in writing by the client. The actual samples are retained for a period of two months and written request is necessary in order to be retained for a longer period of time. All analytical results and records are considered strictly confidential and will not be released under any circumstances to anyone except the actual client. The analytical results included in this report apply only to the items tested.

If you have any questions please contact the Laboratory Manager or the Laboratory Director.

Sincerely,

Patricia Weakley, Optical Asbestos Manager  
Aimee Cormier, Laboratory Director

Enclosure: Version 2  
LAB BATCH ID: B 102708 CLIENT PROJECT ID: 01-207319.07.43  
Client Ref: 240 Beaver Street, Waltham, MA  
AIHA ID# 102754; CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; ME ID# LA-056; NVLAP  
Lab Code 200090-0; RI ID # AAL-093; VT ID# AL016876

# ProScience Analytical Services, Inc.

Client Name: ATC Group Services LLC - Agawam  
 PO #: N/A  
 Client Project #: 01-207319.07.43  
 Client Reference: 240 Beaver Street, Waltham, MA  
 Method: EPA/600/R-93/116

Batch: B102708  
 Date Sampled: 10/6/2016  
 Date Received: 10/31/2016  
 Date Analyzed: 10/31/2016  
 Date of Report: 10/31/2016

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
PS-01A	White	0	0	0	0	0	0	15	0	TR	0	0	0	85
Description: Joint Compound Location: Wall - Pesticide Shed Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
PS-01B	White	0	0	0	0	0	0	15	0	TR	0	0	0	85
Description: Joint Compound Location: Ceiling - Pesticide Shed Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
PS-02A	White	0	0	0	0	0	0	0	0	2	0	0	0	98
Description: Gypsum Location: Wall - Pesticide Shed Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
PS-03A	Black	0	0	0	0	0	0	0	0	40	0	0	0	60
Description: Asphalt Roof Shingle Location: Pesticide Shed Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
BH-01A	Brown	0	0	0	0	0	0	0	0	60	0	0	0	40
Description: Black Wrap on F/G Pipe in Pipe Chase Location: Boiler House Comments: Is asbestos present? No. Analyzed: Yes														

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
BH-01B	Brown	0	0	0	0	0	0	0	0	60	0	0	0	40
Description: Black Wrap on F/G Pipe in Pipe Chase Location: Boiler House Comments: Is asbestos present? No. Analyzed: Yes														

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite  
 Non-Asbestos Codes: FBG = Fiberglass MNW = Mineral Wool CEL = Cellulose HAR = Hair SYN = Synthetic OTH = Other NON = Non-Fibrous Minerals

Note: To create a unique lab sample ID, use the Batch # and the Sample ID (example: [Batch #] - [Sample ID]).

\* All results are in percentage.

Analyst: Sophetra Ken

# ProScience Analytical Services, Inc.

## PLM Asbestos Chain of Custody Record

LABORATORY/HEADQUARTERS

22 Cummings Park, Woburn, MA 01801  
T: 781-935-3212 F: 781-932-4857

Turn Around Time Requested

☐ Rush ☐ Same day ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 5 Days

Client: ATC Associates  
Address: 588 Silver Street, Agawam, MA 01001  
Project Site: 210 Beaver Street - Wallham MA  
Project #: 01-202319.07.43  
Phone Number: (413) 386-4774  
Contact: Eric Kubic Ekubic@esconsult.com

### Special Instructions:

Relinquished by/date:

Received by/date:

Samples received:

Filed/Emailed/Verbal by/date:

Stop on first positive (Yes/No)

For Lab Use Batch #

B102708

Analyzed by/date:

10/3/16

QC by/date:

10/3/16

Sample ID	Date Sampled	Description/Location	% Asbestos	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
PS-014	10/6/16	FT/M Lm Cm Plb/Pis Gyp/Jc Ct Cr Gtz Adh Ppr Rt Description: wall Location: Fabricate shed	0	White	1	1	1												15	15	4.3				85
PS-013		FT/M Lm Cm Plb/Pis Gyp/Jc Ct Cr Gtz Adh Ppr Rt Description: Ceiling Location: "	0	White	1	1	1												15	15	4.3				85
PS-02A		FT/M Lm Cm Plb/Pis Gyp/Jc Ct Cr Gtz Adh Ppr Rt Description: wall Location: "	0	White	1	1	1												15	15	4.3				85
PS-03A		FT/M Lm Cm Plb/Pis Gyp/Jc Ct Cr Gtz Adh Ppr Rt Description: Asphalt Roof Slings Location: "	0	White	1	1	1												15	15	4.3				85
BH-01A		FT/M Lm Cm Plb/Pis Gyp/Jc Ct Cr Gtz Adh Ppr Rt Description: Black wrap on Fire Pipe Location: Boiler House FT/M Lm Cm Plb/Pis Gyp/Jc Ct Cr Gtz Adh Ppr Rt Description: "	0	White	1	1	1												15	15	4.3				85
BH-01B		FT/M Lm Cm Plb/Pis Gyp/Jc Ct Cr Gtz Adh Ppr Rt Description: " Location: "	0	White	1	1	1												15	15	4.3				85

## **APPENDIX D**



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

588 Silver Street, Agawam, MA 01001 tel 413.789.3530 fax 413.789.2776 www.ecsconsult.com

Mr. James Morrissey  
Senior Architect  
Facilities and Campus Planning Division  
University of Massachusetts – Amherst  
360 Campus Center Way  
Amherst, MA 01003

August 14, 2009  
Project No. 01-207783.00  
Document No. 38075

RE: Limited Asbestos and Lead Paint Inspection  
Waltham Research Station  
Main Barn, Calf Barn and Garage  
University of Massachusetts

Dear Jim:

As per your request, Environmental Compliance Services, Inc. (ECS) has completed a limited inspection of building materials for the presence of asbestos-containing materials (ACMs) and lead containing paint (LCP). Materials inspected were from the proposed renovation areas as defined in WR # 06-000809.

On July 7, 2009 ECS personnel collected a total of 4 bulk samples of various suspect roofing materials for asbestos determination. These materials were deemed homogenous with other building materials located in the areas of the proposed renovations.

Laboratory test results DID INDICATE THE PRESENCE OF ASBESTOS.

The inspection sample locations and findings are detailed on the tables below. The sampling inspection forms and laboratory data sheets are enclosed with this letter.

**SUSPECT MATERIALS WITH ASBESTOS DETECTED  
WALTHAM RESEARCH STATION  
MAIN BARN, CALF BARN AND GARAGE  
UNIVERSITY OF MASSACHUSETTS**

Functional Space (s)	Material Description	Sample Number
Waltham Research Station; Calf Barn	Square transite roof shingles	WA-3

**SUSPECT MATERIALS WITH NO ASBESTOS DETECTED  
 WALTHAM RESEARCH STATION  
 MAIN BARN, CALF BARN AND GARAGE  
 UNIVERSITY OF MASSACHUSETTS**

<b>Functional Space (s)</b>	<b>Material Description</b>	<b>Sample Number</b>
Waltham Research Station; Garage	Roofing Material (shingles and paper barrier), from the area of large hole in the roof	WA-1
Waltham Research Station; Main Barn	Roofing Material (shingles and paper barrier), collected from the ground underneath the large hole in the roof	WA-2
Waltham Research Station; Calf Barn	Black roofing barrier found on the ground under large collapsed roof area	WA-4

On July 7, 2009 ECS personnel collected a total of 10 bulk sample of paint for total lead determination. These materials were also deemed homogenous with other building materials located in the area of the proposed renovation. Exact sample locations are detailed on the table below and the sampling inspection forms. The laboratory data sheets are enclosed with this letter. Laboratory test results DID INDICATE THE PRESENCE OF LEAD above method detection limits. All samples were submitted to ProScience Analytical Services an accredited laboratory for asbestos and lead determination.

**LEAD ANALYSIS RESULTS  
 WALTHAM RESEARCH STATION  
 MAIN BARN, CALF BARN AND GARAGE  
 UNIVERSITY OF MASSACHUSETTS**


<b>Building</b>	<b>Description</b>	<b>Sample ID</b>	<b>Substrate and location</b>	<b>Result (% weight)</b>
Waltham Research Station; Garage	White Paint	W-1	Wood trim around doors and windows	6.84
Waltham Research Station; Main Barn	White/Tan Paint	W-2	Large wood door frame	25.79
Waltham Research Station; Main Barn	Green Paint	W-3	Front entrance sliding door	10.24
Waltham Research Station; Main Barn	White Paint	W-9	Wood trim around basement side door frames	36.24
Waltham Research Station; Main Barn	Brown Paint	W-10	Exterior wood siding shingles	0.07
Waltham Research Station; Calf Barn	Green Paint	W-4	Wood window and door frame trim	23.93
Waltham Research Station; Calf Barn	White Paint	W-5	Interior wood window frame trim	0.22
Waltham Research Station; Calf Barn	Orange Paint	W-6	Entrance door	0.02
Waltham Research Station; Calf Barn	Brown Paint	W-7	Interior wood window frame trim	0.57
Waltham Research Station; Calf Barn	White Paint	W-8	Exterior building walls	32.15

Project No. 01-207783.00 Document No. 38075  
Mr. James Morrissey  
University of Massachusetts - Amherst  
August 14, 2009

Page 3

If you have any questions pertaining to this matter, please do not hesitate to contact our office.

Sincerely,  
ENVIRONMENTAL COMPLIANCE SERVICES, INC.



Michael Grover  
*Compliance Technician*  
*Asbestos Inspector #AI000201*



Christopher L. Godfrey  
*Senior Project Manager*

MG/CLG/kab  
Attachments

# ProScience Analytical Services, Inc.

## PLM Asbestos Chain of Custody Record

LABORATORY/HEADQUARTERS LABORATORY SERVICES  
22 Cummings Park, Woburn, MA 01801 683 North Mountain Rd., Newington, CT 06111  
T:781-935-3212 F:781-932-4857 T:860-953-1022 F:860-953-1030

Client: Environmental Compliance Services, ECS

Address: 588 Silver Street, Agawam, MA. 01001

Phone / FAX Number: 413-789-3530 / 413-789-2776

Project Site/Project Job Number: 01-212473.00 /U-Mass Amherst/ Waltham

Contact: Chris Godfrey / Mike Grover Work Request # 06-809

Turn Around Time Requested

☒ Same day ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4-5 Days

Relinquished by/date: Michael Grover 8/2/09

Received by/date: Kathy Artores 8/2/09

Samples received: 4 Analyzed 9:35 AM

Faxed, E-mailed, Verbal by/date: US 8/10/09

Stop on first positive: Yes ☐ No ☐

Analyzed by/date: Alex BSM 8/10/09 QC by/date:

For Lab Use	Batch #	Field ID Sampled date	Lab ID	Description / Location	Visual	Optical Properties	RI	Asbestos Percentage (%)	Circle Type	Non Asbestos Percentage (%)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Sample Description Key: FUMastic=Floor tile and Mastic, Lm=Linoeum, Cm=Carpet mastic, Cvm=Covemolding mastic, Pls=Plaster skim, Plb=Plaster base,

Sh=Sheetrock, Jc=Joint Compound, Pl=Pipe insulation, Ct=Ceiling tile, Ck=Caulking, Glz=Glazing, Gdb=Glue daub

Comments:



☐ RUSH

Page / Of /





**ProScience Analytical Services, Inc.**  
22 Cummings Park, Woburn, MA 01801

Telephone: 781-935-3212  
Facsimile: 781-932-4857  
Email: [chemistry@proscience.net](mailto:chemistry@proscience.net)

## Laboratory Report

**Contact:** Chris Godfrey  
**Client:** ECS, Incorporated  
**Address:** 588 Silver Street  
Agawam, MA 01001

**Batch #:** C 256837  
**Date received:** 8/10/2009  
**Date analyzed:** 8/10/2009  
**Date of report:** 8/10/2009

**Project #** 01-207783  
**P.O.#** n/a  
**Project Site:** UMASS Watham  
WR

### Lead Analysis In Paint Using SW846-7420/3051

Results in weight percent on an "as received" wet weight basis  
All results are accurate to no more than three significant figures.

Unless otherwise indicated, all the quality control criteria for the method above have been met.

Lab ID	Client ID	Sample date	Description	Result	Detection Limit	Comments
C 341029	W-1	8/7/09	White Paint On Wood Trim Around Doors & Windows, Garage	6.84	0.01	
C 341030	W-2	8/7/09	White/Tan- Large Door Frame Paint, Main Barn	25.79	0.01	
C 341031	W-3	8/7/09	Green-Entrance Door Paint, Main Barn	10.24	0.02	
C 341032	W-4	8/7/09	Green Window & Door Frame Paint, Calf Barn	23.93	0.02	
C 341033	W-5	8/7/09	White-Interior Window Frame Trim Paint, Calf Barn	0.22	0.01	
C 341034	W-6	8/7/09	Orange Entrance Door Paint, Calf Barn	0.02	0.01	
C 341035	W-7	8/7/09	Brown-Interior Window Frame Trim Paint, Calf Barn	0.57	0.01	
C 341036	W-8	8/7/09	White-Exterior Wall Paint, Calf Barn	32.15	0.01	
C 341037	W-9	8/7/09	White Trim Paint On Basement Door Fram Main Barn	36.24	0.01	
C 341038	W-10	8/7/09	Brown-Exterior Siding Shingles, Main Barn	0.07	0.01	

BDL - Below Detection Limit

Dan Pine, Chemistry Analyst  
Stephen Chace, Chemistry Laboratory Manager  
Adrian Stanca, Laboratory Director

# ProScience Analytical Services, Inc.

## Chemistry Chain of Custody Record/Metals

LABORATORY/HEADQUARTERS CONSULTING SERVICES

22 Cummings Park, Woburn, MA 01801 683 North Mountain Rd., Newington, CT 08111  
T: 781-935-3212 F: 781-932-4857 T: 860-953-1022 F: 860-953-1030

Client: Environmental Compliance Services

Address: Street 588 Silver Street

Town Agawam State/Zip MA 01001

Project Site Line 1 UMMS Amherst Project Number 01-307783

Line 2 WR more Waltham

Contact: Chris Godfrey/ Mike Grover Phone 413-789-3530 FAX 413-789-2776 AUPager

☐ Rush < 6 Hours

Turn Around Time Requested

☒ Same Day ☐ Next Day ☐ 48 Hours ☐ 72 Hours ☐ 4-5 Days

Element

TYPE OF ANALYSIS (Column 4)

AIR	DUST	PAINT
AI	DU	PA
PM10	SOIL	TOF
PM	SO	TC
TSP	WATER	WPES
TS	WA	WI

☒ Pb ☐ Cd ☐ Cr ☐ As

☐ Se ☐ Ag ☐ Ba ☐ Hg

Other (please specify)

☐ QC

BATCH NUMBER  
C256837

FOR LABORATORY USE ONLY

Date Sampled	Field I.D.	Sample Description/Location	TYPE OF ANALYSIS	Air Sampling Information				Wiped area			ANALYSIS			Lab I.D.
				Start Time	End Time	Start Flowrate	End Flowrate	Volume (liters)	length (inch)	width (inch)	Area (sq in)	Weight (grams)	Diff'n	
8/7/09	W-1	White paint on wood, trim around doors & windows → Garage	PA											341029
	W-2	White/Tan - Large Door Frame Paint → MAIN BARN												30
	W-3	Green - Entrance Door Paint. → MAIN BARN												31
	W-4	Green window & Door Frame Trim Paint → Calf BARN												32
	W-5	White - Interior window Frame Trim Paint → Calf BARN												33
	W-6	Orange entrance Door Paint. → Calf BARN												34
	W-7	Brown - Interior window Frame Trim Paint → Calf BARN												35
	W-8	White - Exterior Wall Paint. → Calf BARN												36
	W-9	White Trim Paint on Basement Door Frames → MAIN BARN												37
8/7/09	W-10	Brown exterior sliding shingles. → main PA	PA											38

Relinquished By:

Received By:

Comments:

Date:

Date:

5/7/09 8:00g

Time:

Time:

Date

Log-out:

Wipes provided by ProScience Analytical

ver 4.7

PG 1 OF 1

For complete information about our services and locations please visit us at [www.proscience.net](http://www.proscience.net) or call the numbers above.

## **APPENDIX E**

# UMassAmherst

## Environmental Health & Safety

January 14, 2018

### Waltham Station – Lead Paint Sampling

On 1-12-18 Doug Montminy completed Lead Determination sampling throughout the Administration building at Waltham Station by XRF (X-Ray Florescent) analysis. The lead determination table is below with the results.

**LEAD ANALYSIS RESULTS  
WALTHAM STATION  
UNIVERSITY OF MASSACHUSETTS, AMHERST, MASSACHUSETTS**

Description	Substrate	Location	Sample ID	Result (% weight) XRF (by Volume action Level 1.0)
Beige Paint	Metal Window Frame	Admin Bldg. Exterior South Side	1	XRF 1.3
Beige Paint	Metal Window Sash	Admin Bldg. Exterior South Side	2	XRF 0.4
Beige Paint	Metal Window Header	Admin Bldg. Exterior South Side	3	XRF 4.2
Black Paint	Metal Stair hand Rail	Admin Bldg. Exterior South Side	4	XRF 3.9
Black Paint	Metal Stair Stringer	Admin Bldg. Exterior South Side	5	XRF 5.9
Red Paint	Metal Door Header	Admin Bldg. Exterior South Side	6	XRF 4.9
White Paint	Wood Door Frame	Admin Bldg. Exterior South Side	7	XRF 0.0
Red Paint	Metal Door	Admin Bldg. Exterior South Side	8	XRF 0.0
Beige Paint	Metal Window Frame	Admin Bldg. Exterior South Side	9	XRF 0.8
Red Paint	Wood Wall	Admin Bldg. Exterior South Side	10	XRF 0.0
Red Paint	Wood Double Door	Admin Bldg. Exterior South Side	11	XRF 0.5
Beige Paint	Metal Window Sash	Admin Bldg. Exterior West Side	12	XRF 1.3
Beige Paint	Metal Window Frame	Admin Bldg. Exterior West Side	13	XRF 1.7

Description	Substrate	Location	Sample ID	Result (% weight) XRF (by Volume action Level 1.0)
Red Paint	Wood Double Door Frame	Admin Bldg. Exterior West Side	14	XRF 6.4
Red Paint	Wood Double Door	Admin Bldg. Exterior West Side	15	XRF 8.1
Beige Paint	Metal 1'x3' Window Frame	Admin Bldg. Exterior North Side	16	XRF 1.6
Beige Paint	Metal 1'x3' Window Sash	Admin Bldg. Exterior North Side	17	XRF 1.8
Beige Paint	Metal 1'x3' Window Header	Admin Bldg. Exterior North Side	18	XRF 3.6
Red Paint	Wood Double Door Frame	Admin Bldg. Exterior East Side	19	XRF 12.3
Red Paint	Wood Double Door	Admin Bldg. Exterior East Side	20	XRF 7.8
Beige Paint	Metal Door Frame	Admin Bldg. Ground Floor Room 6	21	XRF 0.16
Beige Paint	Metal Door	Admin Bldg. Ground Floor Room 6	22	XRF 0.15
Tan Paint	Block Wall	Admin Bldg. Ground Floor Room 6	23	XRF 0.11
White Paint	Concrete Ceiling	Admin Bldg. Ground Floor Room 6	24	XRF 0.01
White Paint	Metal Pipe	Admin Bldg. Ground Floor Room 6	25	XRF 0.02
Beige Paint	Metal Window Frame	Admin Bldg. Ground Floor Room 6	26	XRF 1.8
Beige Paint	Metal Window Sash	Admin Bldg. Ground Floor Room 6	27	XRF 1.7
Beige Paint	Beige Concrete Wall	Admin Bldg. Ground Floor Room 6	28	XRF 0.18
Beige Paint	Metal Door	Admin Bldg. Ground Floor Room 7	29	XRF 0.16
Beige Paint	Metal Door Frame	Admin Bldg. Ground Floor Room 7	30	XRF 0.3
Red Paint	Concrete Cove Base	Admin Bldg. Ground Floor Room 7	31	XRF 1.19
Beige Paint	Concrete Floor	Admin Bldg. Ground Floor Room 7	32	XRF 0.01
Beige Paint	Wood Double Door Frame	Admin Bldg. Ground Floor Main Hall	33	XRF 0.12
Beige Paint	Metal Double Door	Admin Bldg. Ground Floor Main Hall	34	XRF 1.2
Beige Paint	Metal Upper Door Transom	Admin Bldg. Ground Floor Main Hall	35	XRF 1.15
Black Paint	Block Wall	Admin Bldg. Ground Floor Main Hall	36	XRF 0.05
Beige Paint	Concrete Cove Base	Admin Bldg. Ground Floor Main Hall	37	XRF 0.04

Description	Substrate	Location	Sample ID	Result (% weight) XRF (by Volume action Level 1.0)
Beige Paint	Metal Heater Cover	Admin Bldg. Ground Floor Main Hall	38	XRF 0.15
Red Paint	Concrete Floor	Admin Bldg. Ground Floor Main Hall	39	XRF 0.0
Black Paint	Concrete Stair Kick Plate	Admin Bldg. Ground Floor Main Hall	40	XRF 1.0
Black Paint	Metal Newel Post	Admin Bldg. Ground Floor Main Hall	41	XRF 1.7
Black Paint	Metal Hand Rail	Admin Bldg. Ground Floor Main Hall	42	XRF 3.6
Beige Paint	Metal Door Frame	Admin Bldg. Ground Floor Room 9A	43	XRF 0.27
Stain	Wood Door	Admin Bldg. Ground Floor Room 9A	44	XRF 0.0
White Paint	Block Wall	Admin Bldg. Ground Floor Room 9A	45	XRF 0.12
Red Paint	Concrete Floor	Admin Bldg. Ground Floor Room 9A	46	XRF 0.0
Red Paint	Red Metal Floor Plate	Admin Bldg. Ground Floor Room 9A	47	XRF 0.1
Black Paint	Metal Window Frame	Admin Bldg. Ground Floor Room 9A	48	XRF 1.5
Beige Paint	Metal Window Sash	Admin Bldg. Ground Floor Room 9A	49	XRF 2.6
Beige Paint	Concrete Header	Admin Bldg. Ground Floor Room 9A	50	XRF 0.1
White Paint	Concrete Ceiling	Admin Bldg. Ground Floor Room 9A	51	XRF 0.0
Stain	Metal Door Frame	Admin Bldg. Ground Floor Room 9A	52	XRF 0.12
White Paint	Wood Door	Admin Bldg. Ground Floor Room 9A	53	XRF 0.1
Beige Paint	Block Wall	Admin Bldg. Ground Floor Room 9A	54	XRF 0.14
Beige Paint	Concrete Cove Base	Admin Bldg. Ground Floor Room 9A	55	XRF 1.0
Beige Paint	Metal 1'x3' Window Frame	Admin Bldg. Ground Floor Room 9A	56	XRF 3.6
Beige Paint	Metal Door Frame	Admin Bldg. Ground Floor Large Common Room West End	57	XRF 1.2
Beige Paint	Metal Double Door	Admin Bldg. Ground Floor Large Common Room West End	58	XRF 1.3
Beige Paint	Metal Door Window Mullions	Admin Bldg. Ground Floor Large Common Room West End	59	XRF 1.3





**CDW CONSULTANTS, INC.**  
*CIVIL & ENVIRONMENTAL ENGINEERS*

**PHASE II  
LIMITED SUBSURFACE  
INVESTIGATION**

**City of Waltham  
225-227 & 240 Beaver Street  
Waltham, MA**

**Prepared for**

**City of Waltham  
119 School Street  
Waltham, MA 02451**

**July 2019**

**CDW Project # 1830.0**





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## FIGURES

- Figure 1: Site Location Map  
Figure 2: 225-227 Beaver Street Site Plan with Boring Locations  
Figure 3: 240 Beaver Street Site Plan with Monitoring Well and Groundwater Flow Direction

## TABLES

- Table 1: Soil Analytical Results  
Table 2: Groundwater Analytical Results

## APPENDICES

- Appendix A: Soil Boring Logs  
Appendix B: Soil Laboratory Analytical Report  
Appendix C: Groundwater Laboratory Analytical Report



## **1.0 INTRODUCTION**

CDW Consultants, Inc. (CDW), on behalf of our client, City of Waltham, has conducted a limited subsurface investigation on the Site which is located at 225-227 and 240 Beaver Street, Waltham, Massachusetts (Figure 1). The investigation included the advancement of soil borings, soil sampling and analysis, installation of three monitoring wells and groundwater sampling and analysis. This investigation was conducted to evaluate the presence or likely presence of hazardous substances or petroleum products on the property in areas of concern identified in CDW's Phase I Environmental Site Assessment report (Final report dated July 2019).

### **1.1 Purpose**

The purpose of the investigation was to evaluate subsurface conditions in specific areas that, through historic operations, may have been impacted by identified potential sources of contamination at the Site. This investigation was performed in accordance with Massachusetts General Law (MGL) Chapter 21E.

### **1.2 Site & Surrounding Area Description**

CDW conducted an ASTM Phase I investigation of the properties listed as 240 Beaver Street and 225-227 Beaver Street, in Waltham, Massachusetts (the "Site"; Figure 1). The assessment includes one 27.9-acre parcel located at 240 Beaver Street and one 30.84-acre parcel located at 225-227 Beaver Street. Both properties comprise the University of Massachusetts Agriculture Experiment Station that was gifted to the Commonwealth in the early 1900s for educational purposes.

The southern parcel (referenced as Parcel #1) is located at 240 Beaver Street and is improved with a 7,474 square foot administration building built in 1948. The three-story building has approximately 20 offices and an attached auditorium of approximately 5,000 square feet. It is currently used for office space and is known as the main building of the Waltham Experiment Station. The parcel also contains the Gray Workshop Building with four attached greenhouses, a Boiler Building that formerly generated heat for the buildings, the Corn Laboratory with two attached greenhouses, and hoop-style greenhouses. The Administration Building, Gray Workshop Building and the Boiler Building are the main structures currently in use. The parcel is bordered by the Cornelia Warren Ball Fields to the east, Waverly Oaks Road- Route 60 to the south and a residential neighborhood to the west. Access to Parcel 1 is via three gravel driveways that enter the site from Beaver Street. Two driveways provide access and parking along the east, west, and south side of the administration building and the other provides access along the eastern side of the Gray Workshop Building with parking on the south side of the building.

The Parcel 1 buildings are connected to municipal water, sewer and natural gas. The Administration Building was formerly heated with #2 fuel oil, supplied by two 7,500-gallon underground storage tanks (USTs), which were reportedly removed. The Gray Building was formerly heated with #2 fuel oil, supplied by one 1,000-gallon UST that was removed in 1992.

Parcel 2 (225-227 Beaver Street) consists of an abandoned farmhouse and dairy farm buildings including barns, storage sheds, and foundation structures for former buildings. Most of these structures are in disrepair and several have collapsed. The upland field west of the wetland was used for hay production and grazing. The northern portion of this parcel contains approximately 16 acres of wetlands, meadow and succession forest vegetation. The wet meadow and wetland areas were not developed. The parcel is bounded to the north by the Fernald State School, to the south by Waverly Oaks Road and Beaver Street, to the west by Camp Cedar Hill and associated buildings owned by the Girl Scouts of Eastern Massachusetts, and to the east by Waverly Oaks Road. The wetlands contain an approximately 4,600 square feet area of fly ash material brought from an off-site source used for an agricultural research experiment conducted in the 1970's known as the Phoenix Project (a joint USEPA, Mass DEP and City of Waltham DPW project).

According to a July 2016 Periodic Review Class C1 Response Action Outcome by Ramboll Environ, the UMASS experimental station disposed of approximately 66 to 77 tons of municipal incinerator ash residue on Parcel 2 during the summer of 1977. No buildings were known to have been constructed on or near the ash disposal site. The upland field west of the disposal site was used for hay production and/or grazing of cows. The wet meadow was never developed.

The Site is located on the Boston Southwest United States Geological Survey (USGS) 1987 Quadrangle Map at the following approximate location and elevation:

Southern Parcel 1	
Universal Transverse Mercator (UTM) Zone 19 Coordinates	
317708.01	UTM E (Meters)
4694755.68	UTM N (Meters)
Latitude/Longitude	
42.383709°	Latitude (North)
-71.214428°	Longitude (West)
Elevation	
58	Feet above sea level
Northern Parcel 2	
Universal Transverse Mercator (UTM) Zone 19 Coordinates	
318032.00	UTM E (Meters)
4694878.00	UTM N (Meters)
Latitude/Longitude	
42.384886°	Latitude (North)
-71.210534°	Longitude (West)
Elevation	
58-48	Feet above sea level



## **2.0 SUMMARY OF PHASE I SITE ASSESSMENT**

CDW completed a Phase I Environmental Site Assessment in July 2019. The investigation conducted by CDW personnel included a review of available federal, state, and local environmental agency records to identify the presence or likely presence of Recognized Environmental Conditions (RECs), Historical Recognized Environmental Condition (HRECs) and Controlled Recognized Environmental Condition (CRECs). No CRECs were identified during the assessment. RECs and HRECs were identified during the assessment. They were:

The following HRECs and areas of concern were identified during the assessment:

- An HREC was identified on the southern Parcel 1 located at 240 Beaver Street where a portion of the parcel is listed as a Massachusetts Waste Disposal Site that has been assigned Release Tracking Number 3-28048 for a release of oil. A Class B-1 RAO was submitted to the Massachusetts Department of Environmental Protection (MassDEP) on October 5, 2009 as assessments of the release have demonstrated that No Significant Risk exists as a result of the release and therefore site closure has been achieved.
- An HREC was identified on the southern Parcel 1 located at 240 Beaver Street where a portion of the parcel is listed as a Massachusetts Waste Disposal Site that has been assigned Release Tracking Number 3-28050 for a release condition of heavy metals in soil. A Class A-1 RAO was submitted to MassDEP on October 11, 2009 after soil remediation was completed, demonstrating that No Significant Risk exists as a result of the release and therefore site closure has been achieved.
- Parcel 1 (240 Beaver Street) was the site of an upland fly ash research area, and Parcel 2 (225-227 Beaver Street) was the site of a wetlands fly ash research area.
- According to the maintenance foreman for Parcel 1, arsenic based pesticides and herbicides had been stored on-site, and used in the past inside the greenhouses.
- The area in the vicinity of the former 1,000-gallon gasoline UST was reported to have had a release of 196 gallons of gasoline and was removed in 1992.

## **3.0 LIMITED SUBSURFACE INVESTIGATION**

### **3.1 Topography and Hydrogeologic Features**

The Site is located between 48 and 58 feet above sea level, and the topography is generally hilly. According to the USGS geological map the bedrock at the Site consists of diorite and gabbro (Zdigb) (Zen et. al. 1983). The Salem Gabbro-Diorite is described as a Proterzoic mafic plutonic rock that retains its igneous texture with some feldspars and mafic minerals altered to chlorite and epidote. There were no bedrock outcrops observed at the Site.



There are no known drinking water source areas or private well supplies within 500 feet of the Site. The Site is not located within a Potentially Productive Aquifer and no community or known non-community drinking water supply, or MassDEP-approved or interim wellhead protection areas, exist within one mile of the Site.

Federal Emergency Management Agency Flood Insurance Rate Maps indicate that the wet meadow wetland basin is located in a Zone A2 floodplain, which is defined as an area within the 100-year flood zone where base flood elevations and flood hazard factors have been determined. The periphery of this area is designated as a Zone B floodplain, which is defined as an area between the 100 year and the 500-year flood limits. The remainder of southern parcel is located in Zone C floodplain which is outside of the 500-year flood limit.

### **3.2 Soil Borings and Monitoring Wells**

On May 28 and 29, 2019, CDW advanced nine (9) soil borings GP1-1 to GP1-9) at 240 Beaver St and GP2-1 to GP2-4 at 225 to 227 Beaver Street, respectively. The soil borings were advanced track mounted Geoprobe equipped with 5-foot long 2-inch diameter large bore sampling tubes. Soil samples were collected continuously in 5-foot acetate sleeves inserted into large bore sampler to depths ranging from 20 feet at 240 Beaver Street to 5 feet at 225-227 Beaver Street. All soil samples were classified on-site. CDW's subcontractor, Crawford Drilling of Westminster, MA completed the advancement of the soil borings. Soil boring logs are included in Appendix A. CDW's subcontractor, Contest Laboratories, Inc. of East Longmeadow, Massachusetts, completed the laboratory sample analyses.

The selection of the locations of the borings was based upon the potential source of contamination at the Site.

#### **240 Beaver Street**

- GP1-1 was in the area of the two former 7,500-gallon #2 heating oil USTs.
- GP1-2 was in the area of an existing pesticides storage shed.
- GP1-3 was in the area of the former 196-gallon gasoline release from a former 1,000-gallon gasoline UST.
- GP1-4 was located by a storage area containing tractors and other power equipment.
- GP1-5 and 6 were in the vicinity of the former "fly ash" experimental test area.
- GP1-7 and 8 were in the southern dumpsite closest to Waverly Oaks Road.
- GP1-9 was in the area of a former gasoline UST to the north of greenhouse #3.

#### **225-227 Beaver Street**

- GP2-1 was located to the north, in front of the residential house to address possible petroleum related concerns related to heating oil AST piping observed penetrating the front of the house in two locations.



- GP2-2 was in the vicinity of the former silos to the north of the house.
- GP3-3 was in the vicinity of the former calf barn.

#### 240 Beaver Street

A two-inch diameter monitoring well was installed to a depth of 20 feet in borings GP1-3, GP1-5, and GP1-7. The wells were constructed of a 10-foot length of two-inch diameter 0.010 slotted polyvinyl chloride (PVC) well screen threaded to solid PVC riser. Uniformly graded sand was placed around the well screen up to one foot above the screen. One foot of bentonite grout was placed above the sand, followed by native fill to grade. A protective roadway box was installed at grade. The boring/groundwater monitoring well locations are depicted on Figure 2.

#### 225-227 Beaver Street

No monitoring wells were installed at the various boring locations. Refusal on possible bedrock above the water table was encountered at all boring locations. Refusal was encountered between 8 and 10 feet in all boring locations.

### **3.3 Soil Screening and Laboratory Samples**

Soil samples were collected continuously from samples from each boring and field-screened with a photoionization detector (PID) using the headspace method. The soil headspace screening results are provided on the boring logs in Appendix A. The PID is an instrument used to quantify total organic volatiles (TOVs) that ionized at or below 10.6 electron volts (a range which includes gasoline and some fuel oil organics). The detection limit for the instrument is 0.1 parts per million (ppm). One soil sample from each of nine (9) borings at 240 Beaver Street and three (3) borings at 225-227 Beaver Street was selected and submitted for laboratory analysis for extractable petroleum hydrocarbons (EPH), volatile organic compounds (VOCs), volatile petroleum hydrocarbons (VPH), and MCP 14 metals. One soil sample from each boring at the depth that exhibited the highest field screening reading or field evidence of contamination was collected. If no field instrumentation readings were registered during drilling, the soil sample was collected from the vadose zone. The samples were preserved by ice, refrigeration and methanol, as appropriate, prior to laboratory analysis, and delivered to the laboratory accompanied by an appropriate chain of custody record.

### **3.4 Groundwater Sampling**

On June 5, 2019, CDW collected groundwater samples from three newly installed monitoring wells (GP1-3, GP1-5, and GP1-7) and one existing monitoring well (MW-2). All wells were allowed to equilibrate for at least one week prior to sampling. The wells were purged and sampled using disposable polyethylene bailers. At least three well volumes were purged from the well prior to collecting the samples. The groundwater collected was free of silt and was clear during the sampling event. The samples were submitted to CDW's subcontractor, Contest Laboratories, for analysis for EPH, VOCs, VPH, and MCP 14 Metals. The samples for metals analyses were filtered in the field



prior to preservation. In addition, groundwater from monitoring wells GP1-5 and GP1-7 were analyzed for herbicides, pesticides, and PCB's.

### **3.5 Groundwater Gauging**

On June 5, 2019, newly installed monitoring wells and existing monitoring wells were gauged for depth to groundwater and the presence of non-aqueous phase liquid (NAPL) using an oil/water interface probe. Measurements were made to the top of the PVC riser. No NAPL was observed in any on-site monitoring wells. Depth to groundwater ranged from 10.82 feet below the ground surface to 12.69 feet bgs. A groundwater elevation survey was performed. Groundwater appears to be potentially flowing in two directions at the site with a possible groundwater divide. Groundwater in the northern portion of 240 Beaver St appears to be flowing in a northeasterly direction toward a wetland area located in the southern portion of 225-227 Beaver Street. Groundwater in the southern portion of the site appears to be flowing in a southwesterly direction towards low wetland areas closest to Waverly Oaks Road.

Groundwater Flow direction was not calculated at 225-227 Beaver Street. No wells were installed due to possible bedrock refusal.

The depth to groundwater measurements are provided in Table 2.

## **4.0 NATURE AND EXTENT OF CONTAMINATION**

### **4.1 Soil and Groundwater Classifications**

The selection of a soil classification of RCS-1, as defined in the Massachusetts Contingency Plan (MCP), 310 CMR 40.0361(1)(a), for the comparison of Reportable Concentrations, is applicable to the Site because:

- The soil samples are located within 500 feet of a residential property.
- The property is zoned as a recreational area and is open to the public.

The selection of a groundwater classification of RCGW-2, as defined in the MCP, 310 CMR 40.0362, for the purpose of identifying Reportable Concentrations, was based upon the following criterion:

- RCGW-2 shall be applied to all groundwater that is not within a current or potential drinking water source area.



## 4.2 Soil Sample Analysis Results

### 240 Beaver Street

Laboratory analysis of soil samples did not reveal detectable concentrations of VPH compounds, VOC's, Herbicides, or PCB's.

Laboratory analysis of soil samples revealed detectable concentrations EPH compounds, total metals, and pesticides. EPH compounds detected in GP1-7 (10-12') and GP1-8 (10-12') are reported below MCP RCS-1 Reportable Concentrations. The presence of 4,4'-DDT was detected in GP1-7 (3-5') at a concentration of 12 milligrams per kilogram (mg/Kg, or parts per million, ppm) which is above the RCS-1 Standard of 6 mg/Kg. Several heavy metals were detected in GP1-7 (10-12') and GP1-8 (10-12'). Concentrations of Total Chromium (730 mg/kg) and Lead (220 mg/Kg) in GP1-7 (10-12') were detected above RCS-1 Reportable Concentrations of 100 mg/Kg and 200 mg/Kg, respectively. The results of all soil analyses are summarized in Table 1. A copy of the laboratory analytical report is included in Appendix B.

### 225-227 Beaver Street

Laboratory analysis of soil samples did not reveal detectable concentrations of VPH compounds, VOC's, EPH compounds, Herbicides, or PCB's. Low levels of various heavy metals were detected in the three soil samples submitted for analysis. No concentrations were detected above MCP RCS-1 Reportable Concentrations.

## 4.3 Groundwater Sample Analysis Results

### 240 Beaver Street

Groundwater samples were analyzed for EPH, VPH, VOCs, PCB's, and MCP14 metals. No PCB's were detected in groundwater above laboratory detection limits.

No EPH and VPH concentrations were detected in newly installed monitoring wells GP1-3MW, GP1-5MW, and GP1-7MW. Low levels of C9 to C18 Aliphatics and Ethylbenzene were detected in a previously installed one-inch micro well in the vicinity of the former 7,500-gallon fuel oil UST's. No concentrations exceeded MCP RCGW-2 Standards.

Low levels of dissolved metals were detected in all four monitoring wells.

Low levels of pesticides were detected in monitoring well GP1-7MW located in the southern portion of the site. No concentrations exceeded MCP RCGW-2 Standards.





Low concentrations of VOC's were detected in monitoring wells GP1-7MW and MW-2. No concentrations exceeded MCP RCGW-2 Standards.

The results of groundwater analyses are included in Table 2. The laboratory analytical report is included in Appendix C.

#### 225-227 Beaver Street

No groundwater samples were collected from the site.

### **5.0 SUMMARY**

The Site study area for this Phase II Investigation consists of a portion of the property at 225-227 Beaver Street and 240 Beaver Street. This investigation focused on subsurface testing in areas of the property that are potential areas of environmental impact. Based upon the results of subsurface soil and groundwater testing and site observations, CDW is presenting a summary of the key observations.

On May 28 and 29, 2019, CDW advanced nine (9) soil borings (GP1-1 to GP1-9) at 240 Beaver St and GP2-1 to GP2-4 at 225 to 227 Beaver Street, respectively. A two-inch diameter monitoring well was installed to a depth of 20 feet in borings GP1-3MW, GP1-5MW, and GP1-7MW at 240 Beaver Street. No wells were installed at 225-227 Beaver Street due to possible bedrock refusal in all three borings and subsequent adjacent boring locations.

Soil samples were collected continuously from samples from each boring and field-screened with a PID for TOVs. One soil sample from each of nine (9) borings was selected and submitted for laboratory analysis for EPH, VPH, VOCs, PCB's, Herbicides, Pesticides, and MCP 14 Metals. Laboratory analysis of soil samples revealed detectable concentrations EPH compounds, total metals, and pesticides. EPH compounds detected in GP1-7 (10-12') and GP1-8 (10-12') are reported below MCP RCS-1 Reportable Concentrations. Low levels of 4-4' DDT were detected in GP1-7 (3-5') at a concentration of 12 mg/Kg. Total Metals compounds were detected in GP1-7 (10-12') and GP1-8 (10-12'). Total chromium was detected at a concentration of 730 mg/kg, which is above the applicable RCS-1 threshold of 100 mg/kg. Lead was detected at a concentration of 220 mg/Kg which is above the applicable RCS-1 threshold of 200 mg/Kg.

On June 5, 2019, CDW collected groundwater samples from the newly installed monitoring wells (GP1-3MW, GP1-5MW, and GP1-7MW) and one existing monitoring well MW-2. Groundwater samples were analyzed for EPH, VPH, VOCs, PCB's, and MCP14 metals. Low levels of C9 to C18 Aliphatics and Ethylbenzene were detected in a previously installed one-inch micro well in the vicinity of the former 7,500-gallon fuel oil UST's. Low levels of dissolved metals were detected in all four monitoring wells.



Low levels of pesticides were detected in monitoring well GP1-7MW located in the southern portion of the site. No concentrations exceeded MCP RCGW-2 Standards. Low concentrations of VOC's were detected in monitoring wells GP1-7MW and MW-2. No concentrations exceeded MCP RCGW-2 concentrations.

## 6.0 RECOMMENDATIONS

Based upon the Phase II Investigation, CDW has the following recommendations:

As stated above, several possible conditions exist that will require the current or potential future owner to report the release conditions to the MassDEP within 120-days of knowledge. It is possible that additional testing for the presence of Chromium (IV), coal, coal ash, and wood ash, and further inquiry about the historical use of pesticides will demonstrate that one or several of the reporting conditions are exempt as provided in the MCP.

Therefore, it is recommended that an additional soil sample be collected from adjacent to boring GP1-7 from the same depth and test for Hexavalent Chromium (Chromium VI), ORP, and pH and compare to existing RCS-1 standards. The testing would need to be completed within the 120-day period prior to notification. If the Chromium (VI) sample is lower than the applicable RCS-1 standard of 30 mg/kg, then notification to MassDEP for the presence of chromium will not be required.

In addition, the presence of lead at 220 mg/kg is reportable. The same soil sample should also be tested for the presence of coal, coal ash and wood ash. The presence of lead as a result of the coal, coal ash or wood ash would exempt the lead from the 120-day notification requirement as well. Lastly, the presence of 4-4' DDT may not be a reportable event if it can be demonstrated that its presence is exclusively a function of its proper use in accordance with manufacturers labeling and specification.

If the presence of these contaminants persist, the MCP allows for situations where limited soil removal can be conducted (up to 20 cubic yards) as a "Limited Removal Action." If the work is completed and the soil is retested within 120-days and the results are less than the RCS-1 standard, then reporting will not be required.

Due to prior releases and uses of chemicals on-site, future soil excavation on-site should be conducted under a soil management plan. If soils will be exported, the quality of the exported Site soils must be acceptable to the destination site pursuant to MassDEP regulations and policies. At a minimum, the industry-wide practice of collecting one composite sample for every 500 cubic yards of soil to be disturbed should be tested for disposal or reuse analytical parameters. Additional sampling and testing may be required, based on the outcome of prior testing or other destination-specific requirements.



The sampling and analytical program was specific to one or more areas of the Site where testing was accessible, and potential contamination could have or has occurred. Historical research does not guarantee that all former Site use, storage and disposal practices have been properly recorded and/or are presently known. No opinion can be rendered on the presence or absence of contaminants in areas between the sampling locations identified herein. If during future site work or sampling, evidence of a release to soil and/or groundwater is encountered, measures must be conducted to properly manage those conditions.

## **7.0 LIMITATIONS**

This investigation was intended to provide a general assessment of current subsurface conditions and was limited in nature and scope. The findings are limited to the information available at the time of the investigation and the scope of services as defined. The results of the limited subsurface exploration performed on this Site provide the basis for the findings and are representative of conditions at the time of the investigation. No other conclusions, interpretations, or recommendations are contained or implied in this report other than those expressed. Also, CDW makes no warranty, expressed or implied, on the accuracy of the work and information completed by others and upon which CDW has relied to prepare this report. No other use of this report is warranted without the written consent of CDW Consultants, Inc.

## FIGURES



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225 - 227 BEAVER ST SITE PLAN WITH BORING LOCATIONS

225-227 BEAVER STREET  
WALTHAM, MA


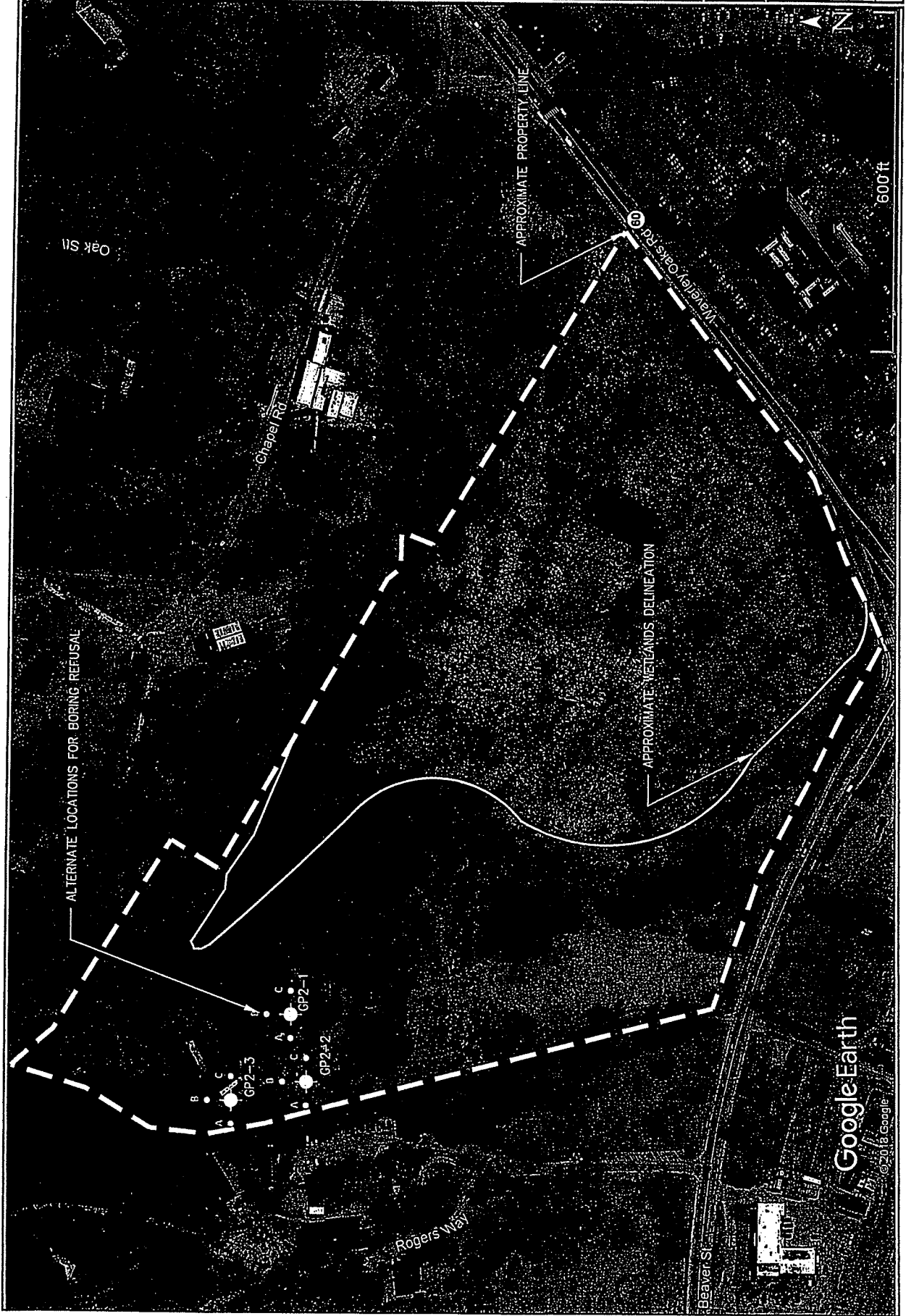


FIGURE 2

1830.0





## TABLES



Table 1  
Soil Analytical Results  
City of Waltham  
225-227 240 Beaver Street, Waltham, MA

CLIENT ID	Reportable Concentrations (RCs)		SAMPLING LOCATION												GP2-3 [7-9] 28-May-19		
	RCs-1	RCs-2	GP1-1 [11-13]														
			28-May-19	28-May-19	28-May-19	28-May-19	28-May-19	28-May-19	28-May-19	28-May-19	28-May-19	28-May-19	28-May-19	28-May-19			
DATE SAMPLED																	
Sample Depth																	
VOCs by GC/MS (mg/kg)																	
Total VOCs																	
Acetone	6	50	<0.077	<0.00077	<0.064	<0.062	<0.069	NT	<0.078	<0.00078	<0.12	<0.012	<0.079	<0.076	<0.072		
Benzene	2	200	<0.0015	<0.00081	<0.00064	<0.00062	<0.00069	NT	<0.0016	<0.00078	<0.0012	<0.0012	<0.00079	<0.00076	<0.00072		
Bromochloromethane	~	1000	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
Bromodichloromethane	0.1	1	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
Bromomethane	0.1	1	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
Bromonitrobenzene	0.5	0.5	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
n-Butylbenzene	4	50	<0.031	<0.0077	<0.0064	<0.0062	<0.0069	NT	<0.031	<0.0078	<0.049	<0.049	<0.032	<0.030	<0.029		
sec-Butylbenzene	~	~	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
tert-Butylbenzene	~	~	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
tert-Butyl Ethyl Ether (TBEE)	~	~	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
Carbon Disulfide	100	1000	<0.0046	<0.00077	<0.0064	<0.0062	<0.0069	NT	<0.0046	<0.00078	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042		
Carbon Tetrachloride	5	5	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
Chlorobenzene	1	3	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
Chlorodibromomethane	0.005	0.03	<0.0077	<0.00081	<0.0064	<0.0062	<0.0069	NT	<0.0078	<0.00078	<0.0012	<0.0012	<0.00079	<0.00076	<0.00072		
Chloroethane	100	1000	<0.031	<0.0077	<0.0064	<0.0062	<0.0069	NT	<0.031	<0.0078	<0.049	<0.049	<0.032	<0.030	<0.029		
Chloroform	0.2	0.2	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
Chloromethane	100	1000	<0.0077	<0.00081	<0.0064	<0.0062	<0.0069	NT	<0.0078	<0.00078	<0.0012	<0.0012	<0.00079	<0.00076	<0.00072		
2-Chloroethanol	100	1000	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
4-Chloroethanol	100	1000	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
1,2-Dibromo-3-chloropropane (DBCP)	10	100	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
1,2-Dibromomethane (EDB)	0.1	0.1	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
Dibromomethane	500	5000	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
1,2-Dichlorobenzene	3	100	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
1,4-Dichlorobenzene	0.7	1	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
1,2-Dichloropropane	1000	10000	<0.0077	<0.00081	<0.0064	<0.0062	<0.0069	NT	<0.0078	<0.00078	<0.0012	<0.0012	<0.00079	<0.00076	<0.00072		
1,1-Dichloroethane	0.4	9	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
1,2-Dichloroethane	0.1	0.1	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
1,2-Dichloroethylene	3	40	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
trans-1,2-Dichloroethylene	0.1	0.1	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
trans-1,2-Dichlorobutene	1	1	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
1,2-Dichloropropane	0.1	0.1	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
1,2-Dichloropropane	500	5000	<0.0077	<0.00081	<0.0064	<0.0062	<0.0069	NT	<0.0078	<0.00078	<0.0012	<0.0012	<0.00079	<0.00076	<0.00072		
1,2-Dichloropropane	0.1	0.1	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
1,2-Dichloropropane	0.01	0.1	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
trans-1,3-Dichloropropene	0.01	0.1	<0.0077	<0.00081	<0.0064	<0.0062	<0.0069	NT	<0.0078	<0.00078	<0.0012	<0.0012	<0.00079	<0.00076	<0.00072		
trans-1,3-Dichloropropene	0.01	0.1	<0.0077	<0.00081	<0.0064	<0.0062	<0.0069	NT	<0.0078	<0.00078	<0.0012	<0.0012	<0.00079	<0.00076	<0.00072		
Dibutyl Ether	100	1000	<0.0077	<0.00081	<0.0064	<0.0062	<0.0069	NT	<0.0078	<0.00078	<0.0012	<0.0012	<0.00079	<0.00076	<0.00072		
Dibutyl Ether (DPE)	100	1000	<0.0077	<0.00081	<0.0064	<0.0062	<0.0069	NT	<0.0078	<0.00078	<0.0012	<0.0012	<0.00079	<0.00076	<0.00072		
Diisobutyl Ether (DIBE)	0.2	6	<0.077	<0.0077	<0.0064	<0.0062	<0.0069	NT	<0.078	<0.0078	<0.12	<0.12	<0.079	<0.076	<0.072		
Hexachlorobutadiene	30	1000	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
Hexachlorocyclopentadiene	40	1000	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
Isopropylbenzene (Cumene)	1000	10000	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
n-Propylbenzene (n-Propene)	100	1000	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
n-Propylbenzene (n-Propene)	0.1	100	<0.0015	<0.0016	<0.0013	<0.0012	<0.0014	NT	<0.0016	<0.0016	<0.0023	<0.0023	<0.0016	<0.0015	<0.0014		
Diethylbenzene (DEB)	0.1	4	<0.0077	<0.00081	<0.0064	<0.0062	<0.0069	NT	<0.0078	<0.00078	<0.0012	<0.0012	<0.00079	<0.00076	<0.00072		
4-Methyl-2-pentanone (MIBK)	50	50	<0.015	<0.0015	<0.013	<0.012	<0.014	NT	<0.016	<0.0016	<0.024	<0.024	<0.016	<0.015	<0.014		
Naphthalene	4	20	<0.0031	<0.0032	<0.0026	<0.0025	<0.0028	NT	<0.0031	<0.0031	<0.0049	<0.0049	<0.0032	<0.0030	<0.029		

Table 1  
Soil Analytical Results  
City of Waltham  
225-227 240 Beaver Street, Waltham, MA

Compound	100	1000	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
n-Propylbenzene	3	1000	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
Styrene	0.1	0.1	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
1,1,2-Tetrachloroethane	0.005	0.02	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
1,1,2,2-Tetrachloroethane	1	10	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
Tetrachloroethylene	500	5000	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
Tetrahydrofuran	30	1000	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
Toluene	30	1000	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
1,2,3-Trichlorobenzene	2	6	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
1,2,4-Trichlorobenzene	30	600	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
1,1,1-Trichloroethane	0.1	2	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
1,1,2-Trichloroethane	0.3	0.3	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
Trichloroethylene	1000	10000	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
Trichlorofluoromethane (Freon 11)	100	1000	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
1,2,3-Trichloropropane	1000	10000	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
1,2,4-Trichlorobenzene	1000	10000	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
1,3,5-Trimethylbenzene	10	100	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
Vinyl Chloride	0.7	0.7	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
m,p-Xylene	100	100	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
o-Xylene	100	100	<0.0015	NT	<0.0016	NT	<0.0014	<0.0012	<0.0013	<0.0016	NT	<0.0024	<0.0023	<0.0016	<0.0015	<0.0015	<0.0014
EPA (mg/kg)																	
C9-C18 Aliphatics	1000	3000	<10	NT	<11	NT	<11	<10	<10	<10	NT	31	<71	<11	<10	<10	<11
C19-C26 Aliphatics	3000	5000	<10	NT	<11	NT	<11	<10	<10	<10	NT	250	870	<11	<10	<10	<11
Unadjusted C13-C22 Aromatics	1000	3000	<10	NT	<11	NT	<11	<10	<10	<10	NT	190	750	<11	<10	<10	17
C11-C22 Aromatics	4	3000	<10	NT	<11	NT	<11	<10	<10	<10	NT	190	750	<11	<10	<10	13
Acephenanthrene	4	3000	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	<11
Acenaphthylene	4	3000	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	<11
Anthracene	1000	3000	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	<11
Benzo[a]anthracene	7	40	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	<11
Benzo[b]fluoranthene	2	7	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	<11
Benzo[k]fluoranthene	7	40	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	0.63
Benzo[a]pyrene	1000	3000	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	0.64
Benzo[e]pyrene	1000	3000	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	0.33
Benzo[g,h,i]perylene	1000	3000	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	0.33
Chrysene	70	40	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	0.37
Dibenz[a,h]anthracene	4	4	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	0.37
Fluoranthene	1000	3000	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	0.78
Indene[1,2,3-cd]pyrene	7	40	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	0.34
2-Methylnaphthalene	0.7	80	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	<11
Naphthalene	4	20	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	<11
Phenanthrene	10	1000	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	<11
Pyrene	1000	3000	<10	NT	<11	NT	<11	<10	<10	<10	NT	<23	<71	<11	<10	<10	0.26
UPP (mg/kg)																	
Unadjusted C5-C8 Aliphatics	100	500	<7.8	NT	<9.2	NT	<8.0	<7.7	<7.5	<7.6	NT	<32	<16	<7.9	<8.6	<9.1	<8.6
C5-C8 Aliphatics	1000	3000	<7.8	NT	<9.2	NT	<8.0	<7.7	<7.5	<7.6	NT	<32	<16	<7.9	<8.6	<9.1	<8.6
Unadjusted C9-C12 Aliphatics	1000	3000	<7.8	NT	<9.2	NT	<8.0	<7.7	<7.5	<7.6	NT	<32	<16	<7.9	<8.6	<9.1	<8.6
C9-C12 Aliphatics	500	500	<7.8	NT	<9.2	NT	<8.0	<7.7	<7.5	<7.6	NT	<32	<16	<7.9	<8.6	<9.1	<8.6
C9-C10 Aromatics	2	200	<0.039	NT	<0.046	NT	<0.040	<0.038	<0.038	<0.038	NT	<16	<0.079	<0.039	<0.043	<0.045	<0.043
Benzene	4	1000	<0.039	NT	<0.046	NT	<0.040	<0.038	<0.038	<0.038	NT	<16	<0.079	<0.039	<0.043	<0.045	<0.043
Ethylbenzene	0.1	100	<0.039	NT	<0.046	NT	<0.040	<0.038	<0.038	<0.038	NT	<16	<0.079	<0.039	<0.043	<0.045	<0.043
Methyl tert-Butyl Ether (MTBE)	1000	10000	<0.20	NT	<0.23	NT	<0.20	<0.19	<0.19	<0.19	NT	<0.80	<0.20	<0.20	<0.21	<0.23	<0.21
Toluene	30	1000	<0.039	NT	<0.046	NT	<0.040	<0.038	<0.038	<0.038	NT	<16	<0.079	<0.039	<0.043	<0.045	<0.043
Naphthalene	100	100	<0.078	NT	<0.092	NT	<0.080	<0.077	<0.075	<0.076	NT	<0.32	<0.16	<0.079	<0.086	<0.091	<0.086
m,p-Xylene	100	100	<0.039	NT	<0.046	NT	<0.040	<0.038	<0.038	<0.038	NT	<16	<0.079	<0.039	<0.043	<0.045	<0.043
o-Xylene	100	100	<0.039	NT	<0.046	NT	<0.040	<0.038	<0.038	<0.038	NT	<16	<0.079	<0.039	<0.043	<0.045	<0.043
Total Metals																	
Antimony	20	30	<1.7	NT	<1.8	NT	<1.7	<1.7	<1.7	<1.7	NT	<3.8	<2.3	<1.7	<1.7	<1.7	<1.8
Asenic	20	20	<1.7	NT	<1.7	NT	<1.7	<1.7	<1.7	<1.7	NT	6.9	13	<1.7	<1.7	<1.7	4.4
Barium	1000	3000	43	NT	18	NT	29	39	19	24	NT	460	90	30	19	23	48
Beryllium	90	200	0.26	NT	0.19	NT	0.19	0.24	0.18	0.2	NT	0.9	0.38	0.19	0.29	0.19	0.31



### Groundwater Sample Results

Parameter		Reportable Concentr		MCP - Method 1 Cleanup Standards				SAMPLING LOCATION				GP-7 MW		MM-2
Sampling Date		RCGW-1	RCGW-2	GW-1	GW-2	GW-3	UCL	GP-3 MW	GP-5 MW	GP-7 MW				
Sample Depth								6/5/2019 9:15:00 AM	6/5/2019 10:30:00 AM	6/5/2019 12:05:00 PM		6/5/2019 1:30:00 PM		
MADEP-EPM-04-2.1 (µg/L)														
C9-C18 ALIPHATICS	700	5000		700	5000	50000	100000	ND (100)	ND (100)	ND (95)	150			
C19-C36 ALIPHATICS	14000	50000	14000	~	50000	100000		ND (100)	ND (100)	ND (95)	ND (99)			
UNADJUSTED C11-C22 AROMATICS	~	~	~	~	~	~	~	ND (100)	ND (100)	ND (95)	ND (99)			
C11-C22 AROMATICS	200	5000	200	50000	5000	100000	100000	ND (100)	ND (100)	ND (95)	ND (99)			
ACENAPHTHENE	20	6000	20	~	~	~	~	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.0)			
ACENAPHTHYLENE	30	40	30	10000	40	100000		ND (2.0)	ND (2.0)	ND (1.9)	ND (2.0)			
ANTHRACENE	30	30	60	~	~	~	~	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.0)			
BENZO(G,H,I)PERYLENE	20	20	50	~	~	~	~	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.0)			
FLUORANTHENE	90	200	90	~	~	~	~	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.0)			
FLUORENE	30	40	30	~	~	~	~	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.0)			
2-METHYLNAPHTHALENE	10	2000	10	2000	20000	100000		ND (2.0)	ND (2.0)	ND (1.9)	ND (2.0)			
NAPHTHALENE	140	700	140	700	20000	100000		ND (2.0)	ND (2.0)	ND (1.9)	ND (2.0)			
PHENANTHRENE	40	10000	40	~	~	~	~	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.0)			
PYRENE	20	20	60	~	~	~	~	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.0)			
MADEP-VPM-Feb 2018 Rev 2.1 (µg/L)														
UNADJUSTED C5-C8 ALIPHATICS	~	~	~	~	~	~	~	ND (100)	ND (100)	ND (100)	ND (100)			
C5-C8 ALIPHATICS	300	3000	300	3000	50000	100000		ND (100)	ND (100)	ND (100)	ND (100)			
UNADJUSTED C9-C12 ALIPHATICS	~	~	~	~	~	~	~	ND (100)	ND (100)	ND (100)	ND (100)			
C9-C12 ALIPHATICS	700	5000	700	5000	50000	100000	100000	ND (100)	ND (100)	ND (100)	ND (100)			
C9-C10 AROMATICS	200	4000	200	4000	50000	100000		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)			
BENZENE	5	1000	5	1000	10000	100000		ND (1.0)	ND (1.0)	ND (1.0)	2.2			
ETHYLBENZENE	700	5000	700	20000	5000	100000		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)			
METHYL TERT-BUTYL ETHER (MTBE)	70	5000	70	50000	50000	100000		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)			
NAPHTHALENE	140	700	140	700	20000	100000		ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)			
TOLUENE	1000	40000	1000	50000	40000	100000		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)			
M/P-XYLENE	3000	3000	10000	3000	50000	100000		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)			
O-XYLENE	3000	3000	10000	3000	5000	100000		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)			
SW-846 6020B (µg/L) Metals Digestion														
ANTIMONY	6	8000	6	~	8000	80000		ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)			
ARSENIC	10	900	10	~	900	9000		ND (0.80)	ND (0.80)	12	ND (0.80)			
BARIUM	2000	50000	2000	~	50000	100000		26	42	20	33			
BERYLLIUM	4	200	4	~	200	2000		ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)			
CADMIUM	4	4	5	~	4	50		ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)			
CHROMIUM	100	300	100	~	300	3000		7	4	4.7	1.1			
LEAD	10	10	15	~	10	150		3.3	1.9	3.2	ND (0.50)			
NICKEL	100	200	100	~	200	2000		ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)			
SELENIUM	50	100	50	~	100	1000		ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)			
SILVER	7	7	100	~	7	1000		ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)			
THALLIUM	2	3000	2	~	3000	30000		ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)			
VANADIUM	30	4000	30	~	4000	40000		ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)			
ZINC	900	900	5000	~	900	50000		15	ND (10)	12	ND (10)			
SW-846 7470A (mg/L) Metals Digestion														
MERCURY	0.002	0.02	0.002	~	0.02	0.2		ND (0.00010)	ND (0.00010)	ND (0.00010)	ND (0.00010)			
SW-846 8081B (µg/L)														



**Table 2**  
City of Waltham  
Groundwater Sample Results  
225-227 240 Beaver Street, Waltham, MA

2-BUTANONE (MEK)	4000	50000	4000	50000	50000	50000	100000	ND (10)	ND (10)	ND (10)	ND (10)
N-BUTYLBENZENE	-	-	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
SEC-BUTYLBENZENE	-	-	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
TERT-BUTYLBENZENE	1000	10000	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
TERT-BUTYLETHYL ETHER	-	-	-	-	-	-	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
CARBON DISULFIDE	1000	10000	-	-	-	-	-	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
CARBON TETRACHLORIDE	2	2	5	2	5000	50000	50000	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
CHLOROBENZENE	100	200	100	200	1000	10000	10000	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
CHLORODIBROMOMETHANE	2	20	20	20	50000	-	-	ND (1.0)	11	ND (1.0)	ND (1.0)
CHLOROETHANE	1000	10000	-	-	-	-	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
CHLOROFORM	50	50	70	50	20000	100000	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
CHLOROMETHANE	1000	10000	-	-	-	-	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
2-CHLOROTOLUENE	1000	10000	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
4-CHLOROTOLUENE	1000	10000	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-DIBROMO-3-CHLOROPROPANE	100	1000	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-DIBROMOETHANE (EDB)	0.02	2	0.02	2	50000	100000	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
DIBROMOMETHANE	5000	50000	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-DICHLOROBENZENE	600	2000	600	8000	2000	80000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,3-DICHLOROBENZENE	100	6000	100	6000	50000	100000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,4-DICHLOROBENZENE	5	60	5	60	8000	80000	-	ND (1.0)	5.4	ND (1.0)	ND (1.0)
DICHLORODIFLUOROMETHANE	10000	100000	-	-	-	-	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
1,1-DICHLOROETHANE	70	2000	70	2000	20000	100000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-DICHLOROETHANE	5	5	5	5	20000	100000	-	ND (1.0)	1.7	ND (1.0)	ND (1.0)
1,1-DICHLOROETHYLENE	7	80	7	80	30000	100000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
CIS-1,2-DICHLOROETHYLENE	20	20	70	20	50000	100000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
TRANS-1,2-DICHLOROETHYLENE	80	80	100	80	50000	100000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-DICHLOROPROPANE	3	3	5	3	50000	100000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,3-DICHLOROPROPANE	5000	50000	-	-	-	-	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
2,2-DICHLOROPROPANE	5	9	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-DICHLOROPROPENE	0.5	5	-	-	-	-	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
CIS-1,3-DICHLOROPROPENE	0.5	5	0.4	10	200	2000	-	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
TRANS-1,3-DICHLOROPROPENE	0.5	5	0.4	10	200	2000	-	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
DIETHYL ETHER	1000	10000	-	-	-	-	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
DIISOPROPYL ETHER	1000	10000	-	-	-	-	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
1,4-DIOXANE	0.3	6000	0.3	6000	50000	100000	-	ND (50)	ND (50)	ND (50)	ND (50)
ETHYLBENZENE	700	5000	700	20000	5000	100000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
HEXACHLOROBUTADIENE	0.6	50	0.6	50	3000	30000	-	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)
2-HEXANONE	1000	10000	-	-	-	-	-	ND (10)	ND (10)	ND (10)	ND (10)
ISOPROPYLBENZENE	10000	100000	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
P-ISOPROPYLTOLUENE	1000	10000	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
METHYL TERT-BUTYL ETHER (MTBE)	70	5000	70	50000	50000	100000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
METHYLENE CHLORIDE	5	2000	5	2000	50000	100000	-	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
4-METHYL-2-PENTANONE (MIBK)	350	50000	350	50000	50000	100000	-	ND (10)	ND (10)	ND (10)	ND (10)
NAPHTHALENE	140	700	140	700	20000	100000	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-PROPYLBENZENE	1000	10000	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
STYRENE	100	100	100	100	6000	60000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,1,2-TETRACHLOROETHANE	5	10	5	10	50000	100000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,2,2-TETRACHLOROETHANE	2	9	2	9	50000	100000	-	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
TETRACHLOROETHYLENE	5	50	5	50	30000	100000	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)

**Table 2**  
**City of Waltham**  
**Groundwater Sample Results**  
**225-227 240 Beaver Street, Waltham, MA**

TETRAHYDROFURAN	5000	50000	-	-	-	-	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
TOLUENE	1000	40000	1000	50000	40000	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2,3-TRICHLOROBENZENE	-	-	-	-	-	-	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
1,2,4-TRICHLOROBENZENE	70	200	70	200	50000	100000	100000	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,1-TRICHLOROETHANE	200	4000	200	4000	20000	100000	100000	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1,2-TRICHLOROETHANE	5	900	5	900	50000	100000	100000	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
TRICHLOROETHYLENE	5	5	5	5	5000	50000	50000	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
TRICHLOROFLUOROMETHANE	10000	100000	-	-	-	-	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
1,2,3-TRICHLOROPROPANE	1000	10000	-	-	-	-	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
1,2,4-TRIMETHYLBENZENE	10000	100000	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,3,5-TRIMETHYLBENZENE	100	1000	-	-	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
VINYL CHLORIDE	2	2	2	2	50000	100000	100000	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
M/P-XYLENE	3000	3000	10000	3000	5000	100000	100000	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
O-XYLENE	3000	3000	10000	3000	5000	100000	100000	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
STW-846 82709 (µg/L)											
BENZO(A)ANTHRACENE	1	1000	1	-	1000	10000	10000	ND (1.0)	ND (1.0)	ND (0.95)	ND (0.95)
BENZO(A)PYRENE	0.2	500	0.2	-	500	5000	5000	ND (0.20)	ND (0.20)	ND (0.19)	ND (0.20)
BENZO(B)FLUORANTHENE	1	400	1	-	400	4000	4000	ND (1.0)	ND (1.0)	ND (0.95)	ND (0.95)
BENZO(K)FLUORANTHENE	1	100	1	-	100	1000	1000	ND (1.0)	ND (1.0)	ND (0.95)	ND (0.95)
CHRYSENE	2	70	2	-	70	700	700	ND (2.0)	ND (2.0)	ND (1.9)	ND (2.0)
DIBENZO(A,H)ANTHRACENE	0.5	40	0.5	-	40	400	400	ND (0.50)	ND (0.50)	ND (0.48)	ND (0.49)
INDENO(1,2,3-CD)PYRENE	0.5	100	0.5	-	100	1000	1000	ND (0.50)	ND (0.50)	ND (0.48)	ND (0.49)

**NOTES:**

1. An asterisk (\*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. - = No Method 1 Standard or UCL available
5. Shaded values exceed the MCP Reportable Concentrations (RCs).
6. Bolded values exceed the Method 1 Cleanup Standards.
7. Bold Red values exceed the TCLP limits.

## **APPENDIX A**



# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 9 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 225-227 Beaver St  
 Completed: 5/28/2019  
 Ground El.

BORING ID: GP2-3  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0.0	brown loamy soil	
-1					1	tan to brown fine SAND,	
-2					0.0	trace coarse sand with gravel; dry	
-3					3		
-4					3	brown fine SAND, 8" coarse sand layer,	
-5	S2		5'	36"	5	gray gravel with silt lenses; dry	
-6					0.0	brown fine SAND, trace medium sand	
-7					7	with gravel and silt lenses; dry	
-8					0.0		
-9					9		
-10			10'			End of Boring at 8 feet; Refusal at 9 ft	
-11							
-12							
-13							
-14							
-15							
-16							
-17							
-18							
-19							
-20							
Note: 3 additional attempts did not drill past 9 feet							
Groundwater Measurements				Summary			
Date	Time	Depth to Groundwater	Measuring Point	Overburden:	Fill; Sand		
				Rock:	NA		
				Well Depth:	NA		
				Boring:	9 ft		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 9 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 225-227 Beaver St  
 Completed: 5/28/2019  
 Ground El.  
 BORING ID: GP2-2  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0.0	brown loamy soil  tan to brown fine SAND, trace coarse sand with gravel; dry  See Above  brown fine SAND, trace medium sand with gravel and silt lenses; dry	
-1					1		
-2					0.0		
-3					3		
-4					3		
-5					0.0		
-6			5'		5		
-7	S2		5'	36"	5		
-8					0.0		
-9					7		
-10					7		
-11					0.0		
-12					9		
-13							
-14							
-15							
-16							
-17							
-18							
-19							
-20							
Note: 3 additional attempts did not drill past 9 feet							
Groundwater Measurements					Summary		
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand		
					Rock: NA		
					Well Depth: NA		
					Boring: 9 ft		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 8 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 225-227 Beaver St  
 Completed: 5/28/2019  
 Ground El.  
 BORING ID: GP2-1  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0.0	brown loamy soil  tan to brown fine SAND, trace coarse sand with gravel; dry  See Above  brown fine SAND, trace medium sand with gravel and silt lenses; dry  End of Boring at 8 feet; Refusal at 8 ft		
-1					1			
-2					0.0			
-3					3			
-4					3			
-5					0.0			
-6			5'		5			
-7	S2		5'	36"	5			
-8					0.0			
-9					7			
-10					7			
-11					0.0			
-12					9			
-13			10'					
-14								
-15								
-16								
-17								
-18								
-19								
-20								
Note: 3 additional attempts did not get past 9 feet								
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater		Measuring Point		Overburden: Fill; Sand		
						Rock: NA		
						Well Depth: NA		
						Boring: 8 ft		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.  
 BORING ID: GP1-6  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1


Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0	black asphalt and graded base tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)	
-1					0.0		
-2					2	tan to gray fine to silty fine SAND, little medium sand; dry  black fine to silty fine SAND, trace medium sand, with wood and glass; dry  black fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet  gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
-3					0.8		
-4					4		
-5	S2		5'	48"	1.1		
-6					6		
-7					0.9		
-8					8		
-9					1.6		
-10	S3		10'	60"	10		
-11					2.1		
-12					12		
-13					1.3		
-14					14		
-15	S4		15'		0.7		
-16					16		
-17					0.1		
-18					18		
-19					0.0		
-20			20'		20		
End of Boring at 20 feet; No Refusal							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand		
					Rock: NA		
					Well Depth: NA		
					Boring: 20'		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.:  
 BORING ID: GP1-7MW  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand, trace medium sand with wood and gravel; dry (FILL)		
-1					0.1			
					2			
-2					2			
					0.0	tan to gray fine to silty fine SAND, little medium sand with wood and glass; dry		
-3					4			
-4					4			
			5'		0.1			
-5	S2		5'	48"	6			
					6			
-6					0.1			
-7					8			
-8					8			
					0.3			
-9			10'		10	See Above		
-10	S3		10'	60"	10			
					0.9			
-11					12			
-12					12			Approximate Water Table
					0.6			gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet
-13					14			
-14					14			
			15'		0.1			
-15	S4		15'		16			gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet
					16			
-16					0.0			
					18			
-17					18			
					0.0			
-18					20	End of Boring at 20 feet; No Refusal		
-19			20'		20			
-20								
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater	Measuring Point	Overburden:	Fill; Sand			
				Rock:	NA			
				Well Depth:	NA			
				Boring:	20'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.:  
 BORING ID: GP1-6  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1


Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0.0	black asphalt and graded base	
-1					1	tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)	
-2					0.0		
-3					3		
-4					3	tan to gray fine to silty fine SAND, little medium sand; dry	
-5					0.0		
-6			5'		5		
-7	S2		5'	48"	5		
-8					0.0		
-9					7	gray fine to silty fine SAND, trace medium sand, with pebbles; dry	
-10					7		
-11					0.0		
-12					9		
-13					9		
-14			10'		0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet	
-15	S3		10'	60"	11		
-16					11		
-17					0.1		
-18					13		
-19					13	gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
-20					0.0		
-21					0.0		
-22			15'		15		
-23	S4		15'		15		
-24					0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
-25					17		
-26					17		
-27					0.0		
-28					0.0		
-29			20'		20	End of Boring at 20 feet; No Refusal	
-30							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater	Measuring Point	Overburden:	Fill; Sand		
				Rock:	NA		
				Well Depth:	NA		
				Boring:	20'		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.:  
 BORING ID: GP1-5MW  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0.0	black asphalt and graded base	
-1					1	tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)	
-2					0.0		
					3		
-3					3	tan to gray fine to silty fine SAND, little medium sand; dry	
					0.0		
-4							
			5'		5		
-5	S2		5'	48"	5		
					0.0		
-6					7		
-7					7		
					0.0		
-8					9	Approximate Water Table	
-9					9		
			10'		0.1		
-10	S3		10'	60"	0.1		
					11		
-11					11	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet	
					0.1		
-12					13		
-13					13		
					0.0		
-14						gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
			15'		15		
-15	S4		15'		15		
					0.1		
-16					17		
-17					17	End of Boring at 20 feet; No Refusal	
-18					0.0		
-19							
			20'		20		
-20							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater	Measuring Point		Overburden: Fill; Sand		
					Rock: NA		
					Well Depth: NA		
					Boring: 20'		

## Groundwater Measurements

## Summary

Date	Time	Depth to Groundwater	Measuring Point

Overburden: Fill; Sand  
 Rock: NA  
 Well Depth: NA  
 Boring: 20'

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.  
 BORING ID: GP1-4  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0.0	black asphalt and graded base tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)		
-1					1			
-2					0.0			
-3					3	tan to gray fine to silty fine SAND, little medium sand; dry		
-4					3			
-5					0.0			
-6			5'		5			
-7	S2		5'	48"	5			
-8					0.0			
-9					7			gray fine to silty fine SAND, trace medium sand, with pebbles; dry
-10					7			
-11					0.0			
-12					9			
-13					9			
-14			10'		0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet		
-15	S3		10'	60"	11			
-16					11			
-17					0.1			
-18					13			
-19					13			
-20					0.0		gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
-21					17			
-22					17			
-23					0.0			
-24					20			
-25			20'		20			
-26						End of Boring at 20 feet; No Refusal		
-27								
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater	Measuring Point		Overburden: Fill; Sand			
					Rock: NA			
					Well Depth: NA			
					Boring: 20'			

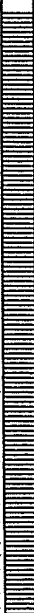


# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.  
 BORING ID: GP1-3MW  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0.0	black asphalt and graded base	
-1					1	tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)	
-2					0.0		
-3					3		
-4					3	tan to gray fine to silty fine SAND, little medium sand; dry	
-5			5'		0.0		
-6					5		
-7	S2		5'	48"	5		
-8					0.0		
-9					7	gray fine to silty fine SAND, trace medium sand, with pebbles; dry	
-10					7		
-11					0.0		
-12					9		
-13					9		
-14			10'		0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet	
-15	S3		10'	60"	11		
-16					11		
-17					0.1		
-18					13		
-19					13	gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
-20					0.0		
-21			15'		15		
-22	S4		15'		15		
-23					0.1		
-24					17	gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
-25					17		
-26					0.0		
-27					20		
-28			20'		20		
-29						End of Boring at 20 feet; No Refusal	
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater	Measuring Point	Overburden: Fill; Sand			
				Rock: NA			
				Well Depth: NA			
				Boring: 20'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.:  
 BORING ID: GP1-2  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0.0	black asphalt and graded base	
-1					1	tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)	
-2					0.0		
-3					3		
-4					3	tan to gray fine to silty fine SAND, little medium sand; dry	
-5					0.0		
-6			5'		5		
-7	S2		5'	48"	5		
-8					0.0		
-9					7	gray fine to silty fine SAND, trace medium sand, with pebbles; dry	
-10					7		
-11					0.0		
-12					9		
-13					9		
-14			10'		0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet	
-15	S3		10'	60"	11		
-16					11		
-17					0.1		
-18					13		
-19					13	gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet	
-20					0.0		
-21					17		
-22					17		
-23					0.0		
-24			20'		20	End of Boring at 20 feet; No Refusal	
-25							
-26							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater	Measuring Point	Overburden: Fill; Sand			
				Rock: NA			
				Well Depth: NA			
				Boring: 20'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El.:  
 BORING ID: GP1-1  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0.0	black asphalt and graded base		
-1					1	tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)		
-2					0.0			
-3					3			
-4					3	tan to gray fine to silty fine SAND, little medium sand; dry		
-5					0.0			
-6			5'		5			
-7	S2		5'	48"	5			
-8					0.0			
-9					7			gray fine to silty fine SAND, trace medium sand, with pebbles; dry
-10					7			
-11					0.0			
-12					9			
-13					9			
-14			10'		0.1			gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet
-15	S3		10'	60"	11			
-16					11			
-17					0.1			
-18					13			
-19					13			
-20					0.0			
-21			15'		15			
-22	S4		15'		15			
-23					0.1			
-24					17	gray fine to silty fine SAND, trace medium sand, trace coarse sand with silt lenses; wet		
-25					17			
-26					0.0			
-27								
-28			20'		20			
-29						End of Boring at 20 feet; No Refusal		
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand			
					Rock: NA			
					Well Depth: NA			
					Boring: 20'			

## **APPENDIX B**



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

June 10, 2019

Marian Rambelle  
CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760

Project Location: Beaver St., Waltham, MA  
Client Job Number:  
Project Number: [none]  
Laboratory Work Order Number: 19E1819

Enclosed are results of analyses for samples received by the laboratory on May 31, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads 'Michelle Koch'. The signature is written in a cursive, flowing style.

Michelle M. Koch  
Project Manager

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CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760  
ATTN: Marian Rambelle

REPORT DATE: 6/10/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

## ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19E1819

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Beaver St., Waltham, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
GP1-1 (11-13)	19E1819-01	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	
GP1-2 (11-13)	19E1819-02	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	
GP1-3 (11-13)	19E1819-03	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	
GP1-4 (11-13)	19E1819-04	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	
GP1-5 (11-13)	19E1819-05	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	
GP1-6 (11-13)	19E1819-06	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	



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CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760  
ATTN: Marian Rambelle

REPORT DATE: 6/10/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

## ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19E1819

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Beaver St., Walham, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
GP1-7 (10-12)	19E1819-07	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	
GP1-8 (10-12)	19E1819-08	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	
GP1-9 (11-13)	19E1819-09	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	
GP2-1 (6-8)	19E1819-10	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	
GP2-2 (7-9)	19E1819-11	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	
GP2-3 (7-9)	19E1819-12	Soil		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SM 2540G SW-846 6010D SW-846 7471B SW-846 8260C	



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CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760  
ATTN: Marian Rambelle

REPORT DATE: 6/10/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

## ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19E1819

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Beaver St., Waltham, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
GP1-2 (0-2)	19E1819-13	Soil		SM 2540G	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
GP1-6 (3-5)	19E1819-14	Soil		SM 2540G	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
GP1-7 (3-5)	19E1819-15	Soil		SM 2540G	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	



---

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#### CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8151 samples were derivatized on 06/06/19.

For method 8151 sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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MADEP-EPH-04-1.1

---

**Qualifications:****L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

**Analyte & Samples(s) Qualified:**

n-Nonane

B232351-BSD1, B232351-MS1

---

**RL-08**

Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

**Analyte & Samples(s) Qualified:**

2-Methylnaphthalene

19E1819-08[GP1-8 (10-12)]

Acenaphthene

19E1819-08[GP1-8 (10-12)]

Acenaphthylene

19E1819-08[GP1-8 (10-12)]

Anthracene

19E1819-08[GP1-8 (10-12)]

Benzo(a)anthracene

19E1819-08[GP1-8 (10-12)]

Benzo(a)pyrene

19E1819-08[GP1-8 (10-12)]

Benzo(b)fluoranthene

19E1819-08[GP1-8 (10-12)]

Benzo(g,h,i)perylene

19E1819-08[GP1-8 (10-12)]

Benzo(k)fluoranthene

19E1819-08[GP1-8 (10-12)]

C9-C18 Aliphatics

19E1819-08[GP1-8 (10-12)]

Chrysene

19E1819-08[GP1-8 (10-12)]

Dibenz(a,h)anthracene

19E1819-08[GP1-8 (10-12)]

Fluoranthene

19E1819-08[GP1-8 (10-12)]

Fluorene

19E1819-08[GP1-8 (10-12)]

Indeno(1,2,3-cd)pyrene

19E1819-08[GP1-8 (10-12)]

Naphthalene

19E1819-08[GP1-8 (10-12)]

Phenanthrene

19E1819-08[GP1-8 (10-12)]

Pyrene

19E1819-08[GP1-8 (10-12)]

MADEP-VPH-Feb 2018 Rev 2.1

---

**Qualifications:****O-01**

Soil/methanol ratio does not meet method specifications. Excess amount of soil. Sample was completely covered with methanol, but with less than the method-specified amount.

**Analyte & Samples(s) Qualified:**

19E1819-01[GP1-1 (11-13)], 19E1819-02[GP1-2 (11-13)], 19E1819-03[GP1-3 (11-13)], 19E1819-04[GP1-4 (11-13)], 19E1819-05[GP1-5 (11-13)], 19E1819-06[GP1-6 (11-13)], 19E1819-09[GP1-9 (11-13)], 19E1819-10[GP2-1 (6-8)], 19E1819-12[GP2-3 (7-9)]

SW-846 6010D

**Qualifications:**



---

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---

**MS-07**

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

**Analyte & Samples(s) Qualified:****Antimony**19E1819-02[GP1-2 (11-13)], B232592-MS1

---

**R-04**

Duplicate relative percent difference (RPD) is a less useful indicator of sample precision for sample results that are <5 times the reporting limit (RL).

**Analyte & Samples(s) Qualified:****Arsenic**

19E1819-02[GP1-2 (11-13)], B232592-DUP1

**Cadmium**

19E1819-02[GP1-2 (11-13)], B232592-DUP1

SW-846 8081B

**Qualifications:**

---

**DL-03**

Elevated reporting limit due to matrix interference.

**Analyte & Samples(s) Qualified:**19E1819-13[GP1-2 (0-2)]

---

**P-02**

Sample RPD between primary and confirmatory analysis exceeded 40%. Per EPA method 8000, the lower value was reported due to obvious chromatographic interference on the column with the higher result.

**Analyte & Samples(s) Qualified:****Endrin Ketone**

19E1819-15[GP1-7 (3-5)]

**Heptachlor Epoxide [2C]**

19E1819-15[GP1-7 (3-5)]

SW-846 8082A

**Qualifications:**

---

**O-32**

A dilution was performed as part of the standard analytical procedure.

**Analyte & Samples(s) Qualified:**

19E1819-13[GP1-2 (0-2)], 19E1819-14[GP1-6 (3-5)], 19E1819-15[GP1-7 (3-5)]

SW-846 8151A

**Qualifications:**

---

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---

**DL-03**

Elevated reporting limit due to matrix interference.

**Analyte & Samples(s) Qualified:**

19E1819-15[GP1-7 (3-5)]  
2,4,5-T  
19E1819-13[GP1-2 (0-2)]  
2,4,5-T [2C]  
19E1819-13[GP1-2 (0-2)]  
2,4,5-TP (Silvex)  
19E1819-13[GP1-2 (0-2)]  
2,4,5-TP (Silvex) [2C]  
19E1819-13[GP1-2 (0-2)]  
2,4-D  
19E1819-13[GP1-2 (0-2)]  
2,4-D [2C]  
19E1819-13[GP1-2 (0-2)]  
2,4-DB  
19E1819-13[GP1-2 (0-2)]  
2,4-DB [2C]  
19E1819-13[GP1-2 (0-2)]  
2,4-Dichlorophenylacetic acid  
19E1819-13[GP1-2 (0-2)]  
2,4-Dichlorophenylacetic acid [2C]  
19E1819-13[GP1-2 (0-2)]  
Dalapon  
19E1819-13[GP1-2 (0-2)]  
Dalapon [2C]  
19E1819-13[GP1-2 (0-2)]  
Dicamba  
19E1819-13[GP1-2 (0-2)]  
Dicamba [2C]  
19E1819-13[GP1-2 (0-2)]  
Dichloroprop  
19E1819-13[GP1-2 (0-2)]  
Dichloroprop [2C]  
19E1819-13[GP1-2 (0-2)]  
Dinoseb  
19E1819-13[GP1-2 (0-2)]  
Dinoseb [2C]  
19E1819-13[GP1-2 (0-2)]  
MCPA  
19E1819-13[GP1-2 (0-2)]  
MCPA [2C]  
19E1819-13[GP1-2 (0-2)]  
MCPP  
19E1819-13[GP1-2 (0-2)]  
MCPP [2C]  
19E1819-13[GP1-2 (0-2)]

---

**L-11**

Laboratory fortified blank/laboratory control sample was outside of control limits on the confirmation column, but within control limits on the primary column. All sample results are reported from the column within control criteria.

**Analyte & Samples(s) Qualified:**

2,4,5-T [2C]  
B232364-BS1, B232364-BSD1

---

**MS-12**

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

**Analyte & Samples(s) Qualified:**

2,4,5-T [2C]  
B232364-MS1, B232364-MSD1

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SW-846 8260C

---

**Qualifications:****L-02**

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

**Analyte & Samples(s) Qualified:****Carbon Disulfide**

B232391-BS1, B232391-BSD1

---

**L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

**Analyte & Samples(s) Qualified:****Chlorodibromomethane**

B232391-BS1

**Methyl tert-Butyl Ether (MTBE)**

B232391-BSD1

**Trichlorofluoromethane (Freon 11)**

B232391-BSD1

---

**L-07A**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

**Analyte & Samples(s) Qualified:****Acetone**

B232391-BS1

---

**R-05**

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

**Analyte & Samples(s) Qualified:****butanone (MEK)**

19E1819-05[GP1-5 (11-13)], 19E1819-06[GP1-6 (11-13)], 19E1819-07[GP1-7 (10-12)], 19E1819-08[GP1-8 (10-12)], 19E1819-09[GP1-9 (11-13)], 19E1819-10[GP2-1 (6-8)], 19E1819-11[GP2-2 (7-9)], 19E1819-12[GP2-3 (7-9)], B232391-BLK1, B232391-BS1, B232391-BSD1

**Acetone**

19E1819-05[GP1-5 (11-13)], 19E1819-06[GP1-6 (11-13)], 19E1819-07[GP1-7 (10-12)], 19E1819-08[GP1-8 (10-12)], 19E1819-09[GP1-9 (11-13)], 19E1819-10[GP2-1 (6-8)], 19E1819-11[GP2-2 (7-9)], 19E1819-12[GP2-3 (7-9)], B232391-BLK1, B232391-BS1, B232391-BSD1

---

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:****1,2,4-Trichlorobenzene**

19E1819-01[GP1-1 (11-13)], 19E1819-02[GP1-2 (11-13)], 19E1819-03[GP1-3 (11-13)], 19E1819-04[GP1-4 (11-13)], B232325-BLK1, B232325-BS1, B232325-BSD1, S036631-CCV1

**Naphthalene**

19E1819-01[GP1-1 (11-13)], 19E1819-02[GP1-2 (11-13)], 19E1819-03[GP1-3 (11-13)], 19E1819-04[GP1-4 (11-13)], 19E1819-05[GP1-5 (11-13)], 19E1819-06[GP1-6 (11-13)], 19E1819-07[GP1-7 (10-12)], 19E1819-08[GP1-8 (10-12)], 19E1819-09[GP1-9 (11-13)], 19E1819-10[GP2-1 (6-8)], 19E1819-11[GP2-2 (7-9)], 19E1819-12[GP2-3 (7-9)], B232325-BLK1, B232325-BS1, B232325-BSD1, B232391-BLK1, B232391-BS1, B232391-BSD1, S036631-CCV1, S036687-CCV1

---

**V-16**

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

**Analyte & Samples(s) Qualified:****1,4-Dioxane**

19E1819-01[GP1-1 (11-13)], 19E1819-02[GP1-2 (11-13)], 19E1819-03[GP1-3 (11-13)], 19E1819-04[GP1-4 (11-13)], 19E1819-05[GP1-5 (11-13)], 19E1819-06[GP1-6 (11-13)], 19E1819-07[GP1-7 (10-12)], 19E1819-08[GP1-8 (10-12)], 19E1819-09[GP1-9 (11-13)], 19E1819-10[GP2-1 (6-8)], 19E1819-11[GP2-2 (7-9)], 19E1819-12[GP2-3 (7-9)], B232325-BLK1, B232325-BS1, B232325-BSD1, B232391-BLK1, B232391-BS1, B232391-BSD1

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V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

**Analyte & Sample(s) Qualified:****1,1,1-Trichloroethane**

B232325-BS1, B232325-BSD1, B232391-BS1, B232391-BSD1, S036631-CCV1, S036687-CCV1

**1,1-Dichloroethylene**

B232391-BS1, B232391-BSD1, S036687-CCV1

**1,2-Dichloroethane**

B232391-BS1, B232391-BSD1, S036687-CCV1

**Carbon Disulfide**

B232391-BS1, B232391-BSD1, S036687-CCV1

**Carbon Tetrachloride**

B232325-BS1, B232325-BSD1, B232391-BS1, B232391-BSD1, S036631-CCV1, S036687-CCV1

**Trichlorofluoromethane (Freon 11)**

B232325-BS1, B232325-BSD1, B232391-BS1, B232391-BSD1, S036631-CCV1, S036687-CCV1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

**Analyte & Sample(s) Qualified:****Bromomethane**

19E1819-01[GP1-1 (11-13)], 19E1819-02[GP1-2 (11-13)], 19E1819-03[GP1-3 (11-13)], 19E1819-04[GP1-4 (11-13)], 19E1819-05[GP1-5 (11-13)], 19E1819-06[GP1-6 (11-13)], 19E1819-07[GP1-7 (10-12)], 19E1819-08[GP1-8 (10-12)], 19E1819-09[GP1-9 (11-13)], 19E1819-10[GP2-1 (6-8)], 19E1819-11[GP2-2 (7-9)], 19E1819-12[GP2-3 (7-9)], B232325-BLK1, B232325-BS1, B232325-BSD1, B232391-BLK1, B232391-BS1, B232391-BSD1, S036631-CCV1, S036687-CCV1

**MADEP-EPH-04-1.1**

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C 11-C22 aromatic fraction in all samples in the batch. No significant modifications were made to the method.

**MADEP-VPH-Feb 2018 Rev 2.1**

No significant modifications were made to the method. All VPH samples were received preserved properly in methanol with a soil/methanol ratio of 1:1 +/- 25% completely covered by methanol in the proper containers specified on the chain-of-custody form unless specified in this narrative.


Analytical column used for VPH analysis is Restek, Rtx-502.2, 105meter, 0.53mmID, 3um df. Trap used for VPH analysis is CarboPack B/CarboSieveS-III.

**SW-846 8260C**

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington  
Technical Representative



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-1 (11-13)

Sampled: 5/28/2019 09:00

Sample ID: 19E1819-01

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Bromomethane	ND	0.0077	mg/Kg dry	1	V-34	SW-846 8260C	6/3/19	6/3/19 15:30	MFF
2-Butanone (MEK)	ND	0.031	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Carbon Disulfide	ND	0.0046	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Chlorodibromomethane	ND	0.00077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Chloroethane	ND	0.0077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Chloroform	ND	0.0031	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Chloromethane	ND	0.0077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,2-Dibromoethane (EDB)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,1-Dichloroethylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,3-Dichloropropane	ND	0.00077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
cis-1,3-Dichloropropene	ND	0.00077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
trans-1,3-Dichloropropene	ND	0.00077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Diethyl Ether	ND	0.0077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Diisopropyl Ether (DIPE)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,4-Dioxane	ND	0.077	mg/Kg dry	1	V-16	SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-1 (11-13)

Sampled: 5/28/2019 09:00

Sample ID: 19E1819-01

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0031	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Methylene Chloride	ND	0.0077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Naphthalene	ND	0.0031	mg/Kg dry	1	V-05	SW-846 8260C	6/3/19	6/3/19 15:30	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,1,2,2-Tetrachloroethane	ND	0.00077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Tetrahydrofuran	ND	0.0077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1	V-05	SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
Vinyl Chloride	ND	0.0077	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
m+p Xylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:30	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	114	70-130	6/3/19 15:30
Toluene-d8	95.8	70-130	6/3/19 15:30
4-Bromofluorobenzene	102	70-130	6/3/19 15:30

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-1 (11-13)

Sampled: 5/28/2019 09:00

Sample ID: 19E1819-01

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Benzo(a)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Benzo(a)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Benzo(b)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Benzo(g,h,i)perylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Benzo(k)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Chrysene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Phenanthrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 18:29	RMW
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	73.7	40-140						6/5/19 18:29	
o-Terphenyl (OTP)	79.8	40-140						6/5/19 18:29	
2-Bromonaphthalene	96.4	40-140						6/5/19 18:29	
2-Fluorobiphenyl	104	40-140						6/5/19 18:29	

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Object Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-1 (11-13)

Sampled: 5/28/2019 09:00

Sample ID: 19E1819-01

Sample Matrix: Soil

Sample Flags: O-01

### Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.39

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	7.8	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
C5-C8 Aliphatics	ND	7.8	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
Unadjusted C9-C12 Aliphatics	ND	7.8	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
C9-C12 Aliphatics	ND	7.8	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
C9-C10 Aromatics	ND	7.8	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
Benzene	ND	0.039	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
Ethylbenzene	ND	0.039	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.039	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
Naphthalene	ND	0.20	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
Toluene	ND	0.039	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
m+p Xylene	ND	0.078	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
o-Xylene	ND	0.039	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:22	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,5-Dibromotoluene (FID)	99.5	70-130						6/4/19 1:22	
2,5-Dibromotoluene (PID)	97.4	70-130						6/4/19 1:22	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-1 (11-13)

Sampled: 5/28/2019 09:00

Sample ID: 19E1819-01

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Arsenic	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Barium	43	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Beryllium	0.26	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Chromium	9.0	0.35	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Lead	5.0	0.52	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:34	AJL
Nickel	8.0	0.35	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Vanadium	28	0.70	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB
Zinc	41	0.70	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:16	EJB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-1 (11-13)

Sampled: 5/28/2019 09:00

Sample ID: 19E1819-01

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.4		% Wt	1		SM 2540G	6/5/19	6/5/19 15:52	JDN

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-2 (11-13)

Sampled: 5/28/2019 10:00

Sample ID: 19E1819-02

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Bromomethane	ND	0.0081	mg/Kg dry	1	V-34	SW-846 8260C	6/3/19	6/3/19 15:55	MFF
2-Butanone (MEK)	ND	0.032	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Carbon Disulfide	ND	0.0049	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Chlorodibromomethane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Chloroethane	ND	0.0081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Chloroform	ND	0.0032	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Chloromethane	ND	0.0081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,2-Dibromoethane (EDB)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,1-Dichloroethylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,3-Dichloropropane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,1-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
cis-1,3-Dichloropropene	ND	0.00081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
trans-1,3-Dichloropropene	ND	0.00081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Diethyl Ether	ND	0.0081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Diisopropyl Ether (DIPE)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,4-Dioxane	ND	0.081	mg/Kg dry	1	V-16	SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-2 (11-13)

Sampled: 5/28/2019 10:00

Sample ID: 19E1819-02

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0032	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Methylene Chloride	ND	0.0081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Naphthalene	ND	0.0032	mg/Kg dry	1	V-05	SW-846 8260C	6/3/19	6/3/19 15:55	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,1,2,2-Tetrachloroethane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Tetrahydrofuran	ND	0.0081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1	V-05	SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
Vinyl Chloride	ND	0.0081	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
m+p Xylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 15:55	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	108	70-130	6/3/19 15:55
Toluene-d8	99.8	70-130	6/3/19 15:55
4-Bromofluorobenzene	110	70-130	6/3/19 15:55



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-2 (11-13)

Sampled: 5/28/2019 10:00

Sample ID: 19E1819-02

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:26	RMW

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	73.2	40-140	6/5/19 19:26
o-Terphenyl (OTP)	87.1	40-140	6/5/19 19:26
2-Bromonaphthalene	107	40-140	6/5/19 19:26
2-Fluorobiphenyl	113	40-140	6/5/19 19:26

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-2 (11-13)

Sampled: 5/28/2019 10:00

Sample ID: 19E1819-02

Sample Matrix: Soil

Sample Flags: O-01

## Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.30

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	9.2	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
C5-C8 Aliphatics	ND	9.2	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
Unadjusted C9-C12 Aliphatics	ND	9.2	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
C9-C12 Aliphatics	ND	9.2	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
C9-C10 Aromatics	ND	9.2	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
Benzene	ND	0.046	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
Ethylbenzene	ND	0.046	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.046	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
Naphthalene	ND	0.23	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
Toluene	ND	0.046	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
m+p Xylene	ND	0.092	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
o-Xylene	ND	0.046	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 1:51	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	97.3	70-130							
2,5-Dibromotoluene (PID)	94.4	70-130							

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-2 (11-13)

Sampled: 5/28/2019 10:00

Sample ID: 19E1819-02

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1	MS-07	SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Arsenic	4.2	1.8	mg/Kg dry	1	R-04	SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Barium	18	1.8	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Beryllium	0.19	0.18	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Cadmium	0.27	0.18	mg/Kg dry	1	R-04	SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Chromium	6.6	0.36	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Lead	9.2	0.54	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:29	AJL
Nickel	5.6	0.36	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Vanadium	14	0.72	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:12	EJB
Zinc	21	0.72	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:12	EJB



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-2 (11-13)

Sampled: 5/28/2019 10:00

Sample ID: 19E1819-02

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.2		% Wt	1		SM 2540G	6/5/19	6/5/19 15:46	JDN

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-3 (11-13)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-03

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Benzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Bromobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Bromochloromethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Bromodichloromethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Bromoform	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Bromomethane	ND	0.0064	mg/Kg dry	1	V-34	SW-846 8260C	6/3/19	6/3/19 16:19	MFF
2-Butanone (MEK)	ND	0.026	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
n-Butylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
sec-Butylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
tert-Butylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Carbon Disulfide	ND	0.0038	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Carbon Tetrachloride	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Chlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Chlorodibromomethane	ND	0.00064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Chloroethane	ND	0.0064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Chloroform	ND	0.0026	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Chloromethane	ND	0.0064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
2-Chlorotoluene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
4-Chlorotoluene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,2-Dibromoethane (EDB)	ND	0.00064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Dibromomethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,2-Dichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,3-Dichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,4-Dichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,1-Dichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,2-Dichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,1-Dichloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
cis-1,2-Dichloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
trans-1,2-Dichloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,2-Dichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,3-Dichloropropane	ND	0.00064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
2,2-Dichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,1-Dichloropropene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
cis-1,3-Dichloropropene	ND	0.00064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
trans-1,3-Dichloropropene	ND	0.00064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Diethyl Ether	ND	0.0064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Diisopropyl Ether (DIPE)	ND	0.00064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,4-Dioxane	ND	0.064	mg/Kg dry	1	V-16	SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Ethylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-3 (11-13)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-03

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
2-Hexanone (MBK)	ND	0.013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Isopropylbenzene (Cumene)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0026	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Methylene Chloride	ND	0.0064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Naphthalene	ND	0.0026	mg/Kg dry	1	V-05	SW-846 8260C	6/3/19	6/3/19 16:19	MFF
n-Propylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Styrene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,1,1,2-Tetrachloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,1,2,2-Tetrachloroethane	ND	0.00064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Tetrachloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Tetrahydrofuran	ND	0.0064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Toluene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,2,3-Trichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
2,4-Trichlorobenzene	ND	0.0013	mg/Kg dry	1	V-05	SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,1,1-Trichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,1,2-Trichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Trichloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,2,3-Trichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,2,4-Trimethylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
1,3,5-Trimethylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Vinyl Chloride	ND	0.0064	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
m+p Xylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
o-Xylene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:19	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	107	70-130							
Toluene-d8	97.8	70-130							
4-Bromofluorobenzene	111	70-130							

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-3 (11-13)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-03

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Benzo(a)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Benzo(a)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Benzo(b)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Benzo(g,h,i)perylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Benzo(k)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Chrysene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Phenanthrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW
Pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/5/19 19:45	RMW

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	73.1	40-140	6/5/19 19:45
o-Terphenyl (OTP)	79.7	40-140	6/5/19 19:45
2-Bromonaphthalene	101	40-140	6/5/19 19:45
2-Fluorobiphenyl	109	40-140	6/5/19 19:45

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-3 (11-13)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-03

Sample Matrix: Soil

Sample Flags: O-01

## Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.48

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	7.5	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
C5-C8 Aliphatics	ND	7.5	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
Unadjusted C9-C12 Aliphatics	ND	7.5	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
C9-C12 Aliphatics	ND	7.5	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
C9-C10 Aromatics	ND	7.5	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
Benzene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
Ethylbenzene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
Naphthalene	ND	0.19	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
Toluene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
m+p Xylene	ND	0.075	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
o-Xylene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:21	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
3-Dibromotoluene (FID)	103	70-130							
2,5-Dibromotoluene (PID)	98.6	70-130							



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-3 (11-13)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-03

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Arsenic	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Barium	19	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Beryllium	0.18	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Chromium	5.2	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Lead	2.5	0.51	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Mercury	ND	0.025	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:35	AJL
Nickel	4.5	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Silver	ND	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Vanadium	14	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB
Zinc	21	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:23	EJB



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-3 (11-13)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-03

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.4		% Wt	1		SM 2540G	6/5/19	6/5/19 15:47	JDN

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-4 (11-13)

Sampled: 5/28/2019 11:40

Sample ID: 19E1819-04

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Benzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Bromobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Bromochloromethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Bromodichloromethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Bromoform	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Bromomethane	ND	0.0062	mg/Kg dry	1	V-34	SW-846 8260C	6/3/19	6/3/19 16:44	MFF
2-Butanone (MEK)	ND	0.025	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
n-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
sec-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
tert-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Carbon Disulfide	ND	0.0037	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Carbon Tetrachloride	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Chlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Chlorodibromomethane	ND	0.00062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Chloroethane	ND	0.0062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Chloroform	ND	0.0025	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Chloromethane	ND	0.0062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
2-Chlorotoluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
4-Chlorotoluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,2-Dibromoethane (EDB)	ND	0.00062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Dibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,2-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,3-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,4-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,1-Dichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,2-Dichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,1-Dichloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
cis-1,2-Dichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
trans-1,2-Dichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,2-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,3-Dichloropropane	ND	0.00062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
2,2-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,1-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
cis-1,3-Dichloropropene	ND	0.00062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
trans-1,3-Dichloropropene	ND	0.00062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Diethyl Ether	ND	0.0062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Diisopropyl Ether (DIPE)	ND	0.00062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,4-Dioxane	ND	0.062	mg/Kg dry	1	V-16	SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Ethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-4 (11-13)

Sampled: 5/28/2019 11:40

Sample ID: 19E1819-04

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
2-Hexanone (MBK)	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Isopropylbenzene (Cumene)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0025	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Methylene Chloride	ND	0.0062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Naphthalene	ND	0.0025	mg/Kg dry	1	V-05	SW-846 8260C	6/3/19	6/3/19 16:44	MFF
n-Propylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Styrene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,1,1,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,1,2,2-Tetrachloroethane	ND	0.00062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Tetrachloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Tetrahydrofuran	ND	0.0062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Toluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,2,3-Trichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
2,4-Trichlorobenzene	ND	0.0012	mg/Kg dry	1	V-05	SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,1,1-Trichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,1,2-Trichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Trichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,2,3-Trichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,2,4-Trimethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
1,3,5-Trimethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
Vinyl Chloride	ND	0.0062	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
m+p Xylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF
o-Xylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/3/19	6/3/19 16:44	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	109	70-130	6/3/19 16:44
Toluene-d8	99.0	70-130	6/3/19 16:44
4-Bromofluorobenzene	113	70-130	6/3/19 16:44

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-4 (11-13)

Sampled: 5/28/2019 11:40

Sample ID: 19E1819-04

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Benzo(a)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Benzo(a)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Benzo(b)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Benzo(g,h,i)perylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Benzo(k)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Chrysene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
benzo(1,2,3-cd)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Phenanthrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB
Pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:36	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	69.5	40-140	6/7/19 0:36
o-Terphenyl (OTP)	78.6	40-140	6/7/19 0:36
2-Bromonaphthalene	103	40-140	6/7/19 0:36
2-Fluorobiphenyl	116	40-140	6/7/19 0:36

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Subject Location: Beaver St., Walham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-4 (11-13)

Sampled: 5/28/2019 11:40

Sample ID: 19E1819-04

Sample Matrix: Soil

Sample Flags: O-01

## Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.40

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	7.7	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
C5-C8 Aliphatics	ND	7.7	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
Unadjusted C9-C12 Aliphatics	ND	7.7	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
C9-C12 Aliphatics	ND	7.7	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
C9-C10 Aromatics	ND	7.7	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
Benzene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
Ethylbenzene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
Naphthalene	ND	0.19	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
Toluene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
m+p Xylene	ND	0.077	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
o-Xylene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 2:50	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
4,5-Dibromotoluene (FID)	104	70-130							
2,5-Dibromotoluene (PID)	93.6	70-130							

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-4 (11-13)

Sampled: 5/28/2019 11:40

Sample ID: 19E1819-04

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Arsenic	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Barium	39	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Beryllium	0.24	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Chromium	7.2	0.35	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Lead	5.8	0.52	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Mercury	ND	0.024	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:37	AJL
Nickel	8.5	0.35	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Vanadium	25	0.69	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB
Zinc	38	0.69	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:28	EJB



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Subject Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-4 (11-13)

Sampled: 5/28/2019 11:40

Sample ID: 19E1819-04

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.1		% Wt	1		SM 2540G	6/5/19	6/5/19 15:47	JDN



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-5 (11-13)

Sampled: 5/28/2019 13:00

Sample ID: 19E1819-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.069	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 7:23	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Benzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Bromobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Bromochloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Bromodichloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Bromoform	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Bromomethane	ND	0.0069	mg/Kg dry	1	V-34	SW-846 8260C	6/4/19	6/4/19 7:23	MFF
2-Butanone (MEK)	ND	0.028	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 7:23	MFF
n-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
sec-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
tert-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Carbon Disulfide	ND	0.0042	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Carbon Tetrachloride	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Chlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Chlorodibromomethane	ND	0.00069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Chloroethane	ND	0.0069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Chloroform	ND	0.0028	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Chloromethane	ND	0.0069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
2-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
4-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,2-Dibromoethane (EDB)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Dibromomethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,2-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,3-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,4-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,1-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,2-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,1-Dichloroethylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
cis-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
trans-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,3-Dichloropropane	ND	0.00069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
2,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,1-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
cis-1,3-Dichloropropene	ND	0.00069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
trans-1,3-Dichloropropene	ND	0.00069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Diethyl Ether	ND	0.0069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Diisopropyl Ether (DIPE)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,4-Dioxane	ND	0.069	mg/Kg dry	1	V-16	SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Ethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-5 (11-13)

Sampled: 5/28/2019 13:00

Sample ID: 19E1819-05

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
2-Hexanone (MBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Isopropylbenzene (Cumene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0028	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Methylene Chloride	ND	0.0069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Naphthalene	ND	0.0028	mg/Kg dry	1	V-05	SW-846 8260C	6/4/19	6/4/19 7:23	MFF
n-Propylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Styrene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,1,2,2-Tetrachloroethane	ND	0.00069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Tetrachloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Tetrahydrofuran	ND	0.0069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Toluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,2,3-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
2,4-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,1,1-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,1,2-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Trichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,2,3-Trichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,2,4-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
1,3,5-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
Vinyl Chloride	ND	0.0069	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
m+p Xylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF
o-Xylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:23	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	6/4/19 7:23
Toluene-d8	98.9	70-130	6/4/19 7:23
4-Bromofluorobenzene	104	70-130	6/4/19 7:23

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-5 (11-13)

Sampled: 5/28/2019 13:00

Sample ID: 19E1819-05

Sample Matrix: Soil

## Petroroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 0:55	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	81.3	40-140						6/7/19 0:55	
o-Terphenyl (OTP)	91.5	40-140						6/7/19 0:55	
2-Bromonaphthalene	118	40-140						6/7/19 0:55	
2-Fluorobiphenyl	128	40-140						6/7/19 0:55	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-5 (11-13)

Sampled: 5/28/2019 13:00

Sample ID: 19E1819-05

Sample Matrix: Soil

Sample Flags: O-01

## Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.41

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	8.0	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
C5-C8 Aliphatics	ND	8.0	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
Unadjusted C9-C12 Aliphatics	ND	8.0	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
C9-C12 Aliphatics	ND	8.0	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
C9-C10 Aromatics	ND	8.0	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
Benzene	ND	0.040	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
Ethylbenzene	ND	0.040	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.040	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
Naphthalene	ND	0.20	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
Toluene	ND	0.040	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
m+p Xylene	ND	0.080	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
o-Xylene	ND	0.040	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:20	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	103	70-130							
2,5-Dibromotoluene (PID)	98.5	70-130							

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-5 (11-13)

Sampled: 5/28/2019 13:00

Sample ID: 19E1819-05

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Arsenic	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Barium	29	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Beryllium	0.19	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Chromium	7.3	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Lead	3.9	0.51	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:39	AJL
Nickel	6.6	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Silver	ND	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Vanadium	19	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB
Zinc	27	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:45	EJB



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-5 (11-13)

Sampled: 5/28/2019 13:00

Sample ID: 19E1819-05

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.8		% Wt	1		SM 2540G	6/5/19	6/5/19 15:47	JDN

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Subject Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-6 (11-13)

Sampled: 5/28/2019 13:50

Sample ID: 19E1819-06

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.078	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 7:48	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Bromomethane	ND	0.0078	mg/Kg dry	1	V-34	SW-846 8260C	6/4/19	6/4/19 7:48	MFF
2-Butanone (MEK)	ND	0.031	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 7:48	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Carbon Disulfide	ND	0.0047	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Chlorodibromomethane	ND	0.00078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Chloroethane	ND	0.0078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Chloroform	ND	0.0031	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Chloromethane	ND	0.0078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,2-Dibromoethane (EDB)	ND	0.00078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,1-Dichloroethylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,3-Dichloropropane	ND	0.00078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,1-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
cis-1,3-Dichloropropene	ND	0.00078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
trans-1,3-Dichloropropene	ND	0.00078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Diethyl Ether	ND	0.0078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Diisopropyl Ether (DIPE)	ND	0.00078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,4-Dioxane	ND	0.078	mg/Kg dry	1	V-16	SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-6 (11-13)

Sampled: 5/28/2019 13:50

Sample ID: 19E1819-06

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0031	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Methylene Chloride	ND	0.0078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Naphthalene	ND	0.0031	mg/Kg dry	1	V-05	SW-846 8260C	6/4/19	6/4/19 7:48	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,1,2,2-Tetrachloroethane	ND	0.00078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Tetrahydrofuran	ND	0.0078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
Vinyl Chloride	ND	0.0078	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
m+p Xylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 7:48	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	106	70-130	6/4/19 7:48
Toluene-d8	101	70-130	6/4/19 7:48
4-Bromofluorobenzene	105	70-130	6/4/19 7:48



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-6 (11-13)

Sampled: 5/28/2019 13:50

Sample ID: 19E1819-06

Sample Matrix: Soil

## Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Benzo(a)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Benzo(a)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Benzo(b)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Benzo(g,h,i)perylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Benzo(k)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Chrysene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Phenanthrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:14	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	71.1	40-140						6/7/19 1:14	
o-Terphenyl (OTP)	78.4	40-140						6/7/19 1:14	
2-Bromonaphthalene	117	40-140						6/7/19 1:14	
2-Fluorobiphenyl	125	40-140						6/7/19 1:14	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-6 (11-13)

Sampled: 5/28/2019 13:50

Sample ID: 19E1819-06

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - VPH

Sample Flags: O-01

Soil/Methanol Preservation Ratio: 1.51

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	7.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
C5-C8 Aliphatics	ND	7.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
Unadjusted C9-C12 Aliphatics	ND	7.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
C9-C12 Aliphatics	ND	7.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
C9-C10 Aromatics	ND	7.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
Benzene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
Ethylbenzene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
Naphthalene	ND	0.19	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
Toluene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
m+p Xylene	ND	0.076	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
o-Xylene	ND	0.038	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 3:49	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	97.6	70-130						6/4/19 3:49	
2,5-Dibromotoluene (PID)	96.7	70-130						6/4/19 3:49	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-6 (11-13)

Sampled: 5/28/2019 13:50

Sample ID: 19E1819-06

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Arsenic	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Barium	24	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Beryllium	0.20	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Chromium	6.7	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Lead	3.7	0.51	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Mercury	ND	0.025	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:40	AJL
Nickel	6.7	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Silver	ND	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Vanadium	21	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB
Zinc	28	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:50	EJB

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-6 (11-13)

Sampled: 5/28/2019 13:50

Sample ID: 19E1819-06

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.0		% Wt	1		SM 2540G	6/5/19	6/5/19 15:47	JDN

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-7 (10-12)

Sampled: 5/28/2019 14:55

Sample ID: 19E1819-07

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 8:12	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Benzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Bromobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Bromochloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Bromodichloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Bromoform	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	V-34	SW-846 8260C	6/4/19	6/4/19 8:12	MFF
2-Butanone (MEK)	ND	0.049	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 8:12	MFF
n-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
sec-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
tert-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Carbon Disulfide	ND	0.0073	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Carbon Tetrachloride	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Chlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Chloroethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Chloroform	ND	0.0049	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
2-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
4-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Dibromomethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,2-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,3-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,4-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,1-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,2-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,1-Dichloroethylene	ND	0.0049	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
cis-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
trans-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
2,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,1-Dichloropropene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Diethyl Ether	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,4-Dioxane	ND	0.12	mg/Kg dry	1	V-16	SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Ethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-7 (10-12)

Sampled: 5/28/2019 14:55

Sample ID: 19E1819-07

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
2-Hexanone (MBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Isopropylbenzene (Cumene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0049	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Methylene Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Naphthalene	ND	0.0049	mg/Kg dry	1	V-05	SW-846 8260C	6/4/19	6/4/19 8:12	MFF
n-Propylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Styrene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,1,1,2-Tetrachloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Tetrachloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Toluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,2,3-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,2,4-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,1,1-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,1,2-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Trichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,2,3-Trichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,2,4-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
1,3,5-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
m+p Xylene	ND	0.0049	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF
o-Xylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:12	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	108	70-130	6/4/19 8:12
Toluene-d8	99.3	70-130	6/4/19 8:12
4-Bromofluorobenzene	105	70-130	6/4/19 8:12

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-7 (10-12)

Sampled: 5/28/2019 14:55

Sample ID: 19E1819-07

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	31	23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
C19-C36 Aliphatics	250	23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Unadjusted C11-C22 Aromatics	190	23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
C11-C22 Aromatics	190	23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Acenaphthene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Acenaphthylene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Anthracene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Benzo(a)anthracene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Benzo(a)pyrene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Benzo(b)fluoranthene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Benzo(g,h,i)perylene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Benzo(k)fluoranthene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Chrysene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Dibenz(a,h)anthracene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Fluoranthene	2.9	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Fluorene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Indeno(1,2,3-cd)pyrene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
2-Methylnaphthalene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Naphthalene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Phenanthrene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB
Pyrene	ND	0.23	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:48	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	63.8	40-140	6/7/19 2:48
o-Terphenyl (OTP)	71.7	40-140	6/7/19 2:48
2-Bromonaphthalene	120	40-140	6/7/19 2:48
2-Fluorobiphenyl	132	40-140	6/7/19 2:48

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-7 (10-12)

Sampled: 5/28/2019 14:55

Sample ID: 19E1819-07

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.24

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	32	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
C5-C8 Aliphatics	ND	32	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
Unadjusted C9-C12 Aliphatics	ND	32	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
C9-C12 Aliphatics	ND	32	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
C9-C10 Aromatics	ND	32	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
Benzene	ND	0.16	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
Ethylbenzene	ND	0.16	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.16	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
Naphthalene	ND	0.80	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
Toluene	ND	0.16	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
m+p Xylene	ND	0.32	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
o-Xylene	ND	0.16	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/4/19 4:18	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
5-Dibromotoluene (FID)	107	70-130							
2,5-Dibromotoluene (PID)	101	70-130							



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

ite Received: 5/31/2019

Field Sample #: GP1-7 (10-12)

Sampled: 5/28/2019 14:55

Sample ID: 19E1819-07

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.8	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Arsenic	6.9	3.8	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Barium	480	3.8	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Beryllium	0.90	0.38	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Cadmium	1.9	0.38	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Chromium	730	0.75	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Lead	220	1.1	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Mercury	0.60	0.057	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:42	AJL
Nickel	60	0.75	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Selenium	ND	7.5	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Silver	0.90	0.75	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Thallium	ND	3.8	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Vanadium	56	1.5	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 23:12	EJB
Zinc	840	3.0	mg/Kg dry	2		SW-846 6010D	6/5/19	6/7/19 14:28	EJB



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-7 (10-12)

Sampled: 5/28/2019 14:55

Sample ID: 19E1819-07

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	43.0		% Wt	1		SM 2540G	6/5/19	6/5/19 15:47	JDN

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-8 (10-12)

Sampled: 5/28/2019 15:45

Sample ID: 19E1819-08

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 8:37	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Benzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Bromobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Bromochloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Bromodichloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Bromoform	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	V-34	SW-846 8260C	6/4/19	6/4/19 8:37	MFF
2-Butanone (MEK)	ND	0.046	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 8:37	MFF
n-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
sec-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
tert-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Carbon Disulfide	ND	0.0070	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Carbon Tetrachloride	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Chlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Chloroethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Chloroform	ND	0.0046	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
2-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
4-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Dibromomethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,2-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,3-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,4-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,1-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,2-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,1-Dichloroethylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
cis-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
trans-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
2,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,1-Dichloropropene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Diethyl Ether	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,4-Dioxane	ND	0.12	mg/Kg dry	1	V-16	SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Ethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-8 (10-12)

Sampled: 5/28/2019 15:45

Sample ID: 19E1819-08

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
2-Hexanone (MBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Isopropylbenzene (Cumene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0046	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Methylene Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Naphthalene	ND	0.0046	mg/Kg dry	1	V-05	SW-846 8260C	6/4/19	6/4/19 8:37	MFF
n-Propylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Styrene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Tetrachloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Toluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,2,3-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,2,4-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,1,1-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,1,2-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Trichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,2,3-Trichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,2,4-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
1,3,5-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
m+p Xylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF
o-Xylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 8:37	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	110	70-130	6/4/19 8:37
Toluene-d8	96.9	70-130	6/4/19 8:37
4-Bromofluorobenzene	101	70-130	6/4/19 8:37

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-8 (10-12)

Sampled: 5/28/2019 15:45

Sample ID: 19E1819-08

Sample Matrix: Soil

## Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
C19-C36 Aliphatics	870	71	mg/Kg dry	5		MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Unadjusted C11-C22 Aromatics	750	71	mg/Kg dry	5		MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
C11-C22 Aromatics	750	71	mg/Kg dry	5		MADEP-EPII-04-1.1	6/3/19	6/7/19 3:07	KLB
Acenaphthene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Acenaphthylene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Anthracene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPII-04-1.1	6/3/19	6/7/19 3:07	KLB
Benzo(a)anthracene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Benzo(a)pyrene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Benzo(b)fluoranthene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Benzo(g,h,i)perylene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Benzo(k)fluoranthene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Chrysene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Dibenz(a,h)anthracene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Fluoranthene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Fluorene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Indeno(1,2,3-cd)pyrene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
1-Methylnaphthalene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Naphthalene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Phenanthrene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPII-04-1.1	6/3/19	6/7/19 3:07	KLB
Pyrene	ND	0.71	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	6/3/19	6/7/19 3:07	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	71.9	40-140						6/7/19 3:07	
o-Terphenyl (OTP)	75.0	40-140						6/7/19 3:07	
2-Bromonaphthalene	89.6	40-140						6/7/19 3:07	
2-Fluorobiphenyl	97.7	40-140						6/7/19 3:07	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GPI-8 (10-12)

Sampled: 5/28/2019 15:45

Sample ID: 19E1819-08

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.22

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
C5-C8 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
Unadjusted C9-C12 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
C9-C12 Aliphatics	ND	16	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
C9-C10 Aromatics	ND	16	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
Benzene	ND	0.079	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
Ethylbenzene	ND	0.079	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.079	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
Naphthalene	ND	0.40	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
Toluene	ND	0.079	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
m+p Xylene	ND	0.16	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
o-Xylene	ND	0.079	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 12:39	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
4,5-Dibromotoluene (FID)	101	70-130							
2,5-Dibromotoluene (PID)	97.3	70-130							

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-8 (10-12)

Sampled: 5/28/2019 15:45

Sample ID: 19E1819-08

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.3	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Arsenic	13	2.3	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Barium	90	2.3	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Beryllium	0.38	0.23	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Cadmium	0.90	0.23	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Chromium	81	0.46	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Lead	91	0.69	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Mercury	0.11	0.036	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:48	AJL
Nickel	32	0.46	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Selenium	ND	4.6	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Silver	ND	0.46	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Thallium	ND	2.3	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Vanadium	68	0.92	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB
Zinc	390	0.92	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 21:55	EJB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-8 (10-12)

Sampled: 5/28/2019 15:45

Sample ID: 19E1819-08

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	70.3		% Wt	1		SM 2540G	6/5/19	6/5/19 15:47	JDN



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GPI-9 (11-13)

Sampled: 5/29/2019 07:00

Sample ID: 19E1819-09

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.079	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 9:02	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Bromomethane	ND	0.0079	mg/Kg dry	1	V-34	SW-846 8260C	6/4/19	6/4/19 9:02	MFF
2-Butanone (MEK)	ND	0.032	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 9:02	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Carbon Disulfide	ND	0.0048	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Chlorodibromomethane	ND	0.00079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Chloroethane	ND	0.0079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Chloroform	ND	0.0032	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Chloromethane	ND	0.0079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,2-Dibromoethane (EDB)	ND	0.00079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,1-Dichloroethylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,3-Dichloropropane	ND	0.00079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,1-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
cis-1,3-Dichloropropene	ND	0.00079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
trans-1,3-Dichloropropene	ND	0.00079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Diethyl Ether	ND	0.0079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Diisopropyl Ether (DIPE)	ND	0.00079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,4-Dioxane	ND	0.079	mg/Kg dry	1	V-16	SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-9 (11-13)

Sampled: 5/29/2019 07:00

Sample ID: 19E1819-09

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0032	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Methylene Chloride	ND	0.0079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Naphthalene	ND	0.0032	mg/Kg dry	1	V-05	SW-846 8260C	6/4/19	6/4/19 9:02	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,1,2,2-Tetrachloroethane	ND	0.00079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Tetrahydrofuran	ND	0.0079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Vinyl Chloride	ND	0.0079	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
m+p Xylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:02	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	105	70-130							
Toluene-d8	99.4	70-130							
4-Bromofluorobenzene	105	70-130							

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Subject Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-9 (11-13)

Sampled: 5/29/2019 07:00

Sample ID: 19E1819-09

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Unadjusted C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
C11-C22 Aromatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
1-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:33	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	72.7	40-140							
o-Terphenyl (OTP)	79.7	40-140							
2-Bromonaphthalene	117	40-140							
2-Fluorobiphenyl	124	40-140							

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-9 (11-13)

Sampled: 5/29/2019 07:00

Sample ID: 19E1819-09

Sample Matrix: Soil

Sample Flags: O-01

## Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.43

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	7.9	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
C5-C8 Aliphatics	ND	7.9	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
Unadjusted C9-C12 Aliphatics	ND	7.9	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
C9-C12 Aliphatics	ND	7.9	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
C9-C10 Aromatics	ND	7.9	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
Benzene	ND	0.039	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
Ethylbenzene	ND	0.039	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.039	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
Naphthalene	ND	0.20	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
Toluene	ND	0.039	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
m+p Xylene	ND	0.079	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
o-Xylene	ND	0.039	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:08	KMB
Surrogates	% Recovery	Recovery Limits		Flag/Qual					
5-Dibromotoluene (FID)	96.4	70-130						6/3/19 13:08	
1,5-Dibromotoluene (PID)	92.5	70-130						6/3/19 13:08	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-9 (11-13)

Sampled: 5/29/2019 07:00

Sample ID: 19E1819-09

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Arsenic	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Barium	30	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Beryllium	0.19	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Chromium	5.8	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Lead	3.5	0.51	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:49	AJL
Nickel	5.5	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Silver	ND	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Vanadium	18	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB
Zinc	25	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:00	EJB

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-9 (11-13)

Sampled: 5/29/2019 07:00

Sample ID: 19E1819-09

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.0		% Wt	1		SM 2540G	6/5/19	6/5/19 15:47	JDN

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-1 (6-8)

Sampled: 5/29/2019 08:30

Sample ID: 19E1819-10

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.076	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 9:26	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Bromomethane	ND	0.0076	mg/Kg dry	1	V-34	SW-846 8260C	6/4/19	6/4/19 9:26	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 9:26	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Carbon Disulfide	ND	0.0045	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Chlorodibromomethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Chloroethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Chloromethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,2-Dibromoethane (EDB)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,3-Dichloropropane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
cis-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
trans-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Diethyl Ether	ND	0.0076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Diisopropyl Ether (DIPE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,4-Dioxane	ND	0.076	mg/Kg dry	1	V-16	SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-1 (6-8)

Sampled: 5/29/2019 08:30

Sample ID: 19E1819-10

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Methylene Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Naphthalene	ND	0.0030	mg/Kg dry	1	V-05	SW-846 8260C	6/4/19	6/4/19 9:26	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,1,2,2-Tetrachloroethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Tetrahydrofuran	ND	0.0076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Vinyl Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:26	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	107	70-130							
Toluene-d8	100	70-130							
4-Bromofluorobenzene	105	70-130							



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Object Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-1 (6-8)

Sampled: 5/29/2019 08:30

Sample ID: 19E1819-10

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Benzo(a)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Benzo(a)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Benzo(b)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Benzo(g,h,i)perylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Benzo(k)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Chrysene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Phenanthrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 1:52	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	74.8	40-140						6/7/19 1:52	
o-Terphenyl (OTP)	87.9	40-140						6/7/19 1:52	
2-Bromonaphthalene	118	40-140						6/7/19 1:52	
2-Fluorobiphenyl	125	40-140						6/7/19 1:52	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-1 (6-8)

Sampled: 5/29/2019 08:30

Sample ID: 19E1819-10

Sample Matrix: Soil

Sample Flags: O-01

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.27

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
C5-C8 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
Unadjusted C9-C12 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
C9-C12 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
C9-C10 Aromatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
Benzene	ND	0.043	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
Ethylbenzene	ND	0.043	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.043	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
Naphthalene	ND	0.21	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
Toluene	ND	0.043	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
m+p Xylene	ND	0.086	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
o-Xylene	ND	0.043	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 13:38	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,5-Dibromotoluene (FID)	104	70-130							
2,5-Dibromotoluene (PID)	99.4	70-130							

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-1 (6-8)

Sampled: 5/29/2019 08:30

Sample ID: 19E1819-10

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Arsenic	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Barium	23	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Beryllium	0.29	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Chromium	38	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Lead	7.6	0.51	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:51	AJL
Nickel	17	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Silver	ND	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Vanadium	41	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB
Zinc	39	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:05	EJB

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-1 (6-8)

Sampled: 5/29/2019 08:30

Sample ID: 19E1819-10

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.3		% Wt	1		SM 2540G	6/5/19	6/5/19 15:47	JDN

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-2 (7-9)

Sampled: 5/29/2019 09:45

Sample ID: 19E1819-11

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.075	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 9:51	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Bromomethane	ND	0.0075	mg/Kg dry	1	V-34	SW-846 8260C	6/4/19	6/4/19 9:51	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 9:51	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Carbon Disulfide	ND	0.0045	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Chlorodibromomethane	ND	0.00075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Chloroethane	ND	0.0075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Chloromethane	ND	0.0075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,2-Dibromoethane (EDB)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,3-Dichloropropane	ND	0.00075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
cis-1,3-Dichloropropene	ND	0.00075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
trans-1,3-Dichloropropene	ND	0.00075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Diethyl Ether	ND	0.0075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Diisopropyl Ether (DIPE)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,4-Dioxane	ND	0.075	mg/Kg dry	1	V-16	SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-2 (7-9)

Sampled: 5/29/2019 09:45

Sample ID: 19E1819-11

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Methylene Chloride	ND	0.0075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Naphthalene	ND	0.0030	mg/Kg dry	1	V-05	SW-846 8260C	6/4/19	6/4/19 9:51	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,1,2,2-Tetrachloroethane	ND	0.00075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Tetrahydrofuran	ND	0.0075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Vinyl Chloride	ND	0.0075	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 9:51	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	103	70-130							
Toluene-d8	98.1	70-130							
4-Bromofluorobenzene	104	70-130							

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-2 (7-9)

Sampled: 5/29/2019 09:45

Sample ID: 19E1819-11

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Benzo(a)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Benzo(a)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Benzo(b)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Benzo(g,h,i)perylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Benzo(k)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Chrysene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Phenanthrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:11	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	79.1	40-140						6/7/19 2:11	
o-Terphenyl (OTP)	88.0	40-140						6/7/19 2:11	
2-Bromonaphthalene	118	40-140						6/7/19 2:11	
2-Fluorobiphenyl	125	40-140						6/7/19 2:11	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-2 (7-9)

Sampled: 5/29/2019 09:45

Sample ID: 19E1819-11

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.20

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	9.1	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
C5-C8 Aliphatics	ND	9.1	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
Unadjusted C9-C12 Aliphatics	ND	9.1	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
C9-C12 Aliphatics	ND	9.1	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
C9-C10 Aromatics	ND	9.1	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
Benzene	ND	0.045	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
Ethylbenzene	ND	0.045	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.045	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
Naphthalene	ND	0.23	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
Toluene	ND	0.045	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
m+p Xylene	ND	0.091	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
o-Xylene	ND	0.045	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:07	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,5-Dibromotoluene (FID)	101	70-130							
2,5-Dibromotoluene (PID)	98.2	70-130							



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-2 (7-9)

Sampled: 5/29/2019 09:45

Sample ID: 19E1819-11

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Arsenic	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Barium	19	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Beryllium	0.19	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Chromium	6.0	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Lead	4.0	0.51	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:52	AJL
Nickel	5.4	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Silver	ND	0.34	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Vanadium	17	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB
Zinc	24	0.68	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:10	EJB

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-2 (7-9)

Sampled: 5/29/2019 09:45

Sample ID: 19E1819-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.0		% Wt	1		SM 2540G	6/5/19	6/5/19 15:47	JDN

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Site Received: 5/31/2019

Field Sample #: GP2-3 (7-9)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-12

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.072	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 10:15	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Benzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Bromobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Bromochloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Bromodichloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Bromoform	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Bromomethane	ND	0.0072	mg/Kg dry	1	V-34	SW-846 8260C	6/4/19	6/4/19 10:15	MFF
2-Butanone (MEK)	ND	0.029	mg/Kg dry	1	R-05	SW-846 8260C	6/4/19	6/4/19 10:15	MFF
n-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
sec-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
tert-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Carbon Disulfide	ND	0.0043	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Carbon Tetrachloride	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Chlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Chlorodibromomethane	ND	0.00072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Chloroethane	ND	0.0072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Chloroform	ND	0.0029	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Chloromethane	ND	0.0072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
2-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
4-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,2-Dibromoethane (EDB)	ND	0.00072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Dibromomethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,2-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,3-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,4-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,1-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,2-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,1-Dichloroethylene	ND	0.0029	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
cis-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
trans-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,3-Dichloropropane	ND	0.00072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
2,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,1-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
cis-1,3-Dichloropropene	ND	0.00072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
trans-1,3-Dichloropropene	ND	0.00072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Diethyl Ether	ND	0.0072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Isopropyl Ether (DIPE)	ND	0.00072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,4-Dioxane	ND	0.072	mg/Kg dry	1	V-16	SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Ethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-3 (7-9)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-12

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
2-Hexanone (MBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Isopropylbenzene (Cumene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0029	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Methylene Chloride	ND	0.0072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Naphthalene	ND	0.0029	mg/Kg dry	1	V-05	SW-846 8260C	6/4/19	6/4/19 10:15	MFF
n-Propylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Styrene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,1,2,2-Tetrachloroethane	ND	0.00072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Tetrachloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Tetrahydrofuran	ND	0.0072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Toluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,2,3-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
2,4-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,1,1-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,1,2-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Trichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,2,3-Trichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,2,4-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
1,3,5-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Vinyl Chloride	ND	0.0072	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
m+p Xylene	ND	0.0029	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
o-Xylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	6/4/19	6/4/19 10:15	MFF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	112	70-130							
Toluene-d8	99.1	70-130							
4-Bromofluorobenzene	106	70-130							

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-3 (7-9)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-12

Sample Matrix: Soil

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Unadjusted C11-C22 Aromatics	17	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
C11-C22 Aromatics	13	11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Benzo(a)anthracene	0.29	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Benzo(a)pyrene	0.63	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Benzo(b)fluoranthene	0.64	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Benzo(g,h,i)perylene	0.33	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Benzo(k)fluoranthene	0.23	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Chrysene	0.37	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Fluoranthene	0.78	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Indeno(1,2,3-cd)pyrene	0.34	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Phenanthrene	0.26	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Pyrene	0.56	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	6/3/19	6/7/19 2:30	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	73.4	40-140						6/7/19 2:30	
o-Terphenyl (OTP)	83.5	40-140						6/7/19 2:30	
2-Bromonaphthalene	118	40-140						6/7/19 2:30	
2-Fluorobiphenyl	129	40-140						6/7/19 2:30	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-3 (7-9)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-12

Sample Matrix: Soil

Sample Flags: O-01

## Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.42

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
C5-C8 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
Unadjusted C9-C12 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
C9-C12 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
C9-C10 Aromatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
Benzene	ND	0.043	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
Ethylbenzene	ND	0.043	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
Methyl tert-Butyl Ether (MTBE)	ND	0.043	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
Naphthalene	ND	0.21	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
Toluene	ND	0.043	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
m+p Xylene	ND	0.086	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
o-Xylene	ND	0.043	mg/Kg dry	1		MADEP-VPH-Feb 2018 Rev 2.1	6/3/19	6/3/19 14:36	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	101	70-130							
2,5-Dibromotoluene (PID)	96.6	70-130							

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-3 (7-9)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-12

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Arsenic	4.4	1.8	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Barium	48	1.8	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Beryllium	0.31	0.18	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Cadmium	0.38	0.18	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Chromium	11	0.36	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Lead	110	0.54	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Mercury	0.080	0.026	mg/Kg dry	1		SW-846 7471B	6/6/19	6/7/19 10:54	AJL
Nickel	10	0.36	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Vanadium	33	0.72	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB
Zinc	70	0.72	mg/Kg dry	1		SW-846 6010D	6/5/19	6/6/19 22:15	EJB

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP2-3 (7-9)

Sampled: 5/28/2019 10:50

Sample ID: 19E1819-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.8		% Wt	1		SM 2540G	6/5/19	6/5/19 15:48	JDN



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-2 (0-2)

Sampled: 5/28/2019 10:00

Sample ID: 19E1819-13

Sample Matrix: Soil

Sample Flags: DL-03

## Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.031	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
alpha-BHC [1]	ND	0.031	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
beta-BHC [1]	ND	0.031	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
delta-BHC [1]	ND	0.031	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
gamma-BHC (Lindane) [1]	ND	0.012	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Chlordane [1]	ND	0.12	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
4,4'-DDD [1]	ND	0.025	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
4,4'-DDE [1]	0.57	0.025	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
4,4'-DDT [1]	0.48	0.025	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Dieldrin [1]	ND	0.025	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Endosulfan I [1]	ND	0.031	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Endosulfan II [1]	ND	0.050	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Endosulfan sulfate [1]	ND	0.050	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Endrin [1]	ND	0.050	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Endrin ketone [1]	ND	0.050	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Heptachlor [1]	ND	0.031	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Heptachlor epoxide [1]	ND	0.031	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Hexachlorobenzene [1]	ND	0.037	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Methoxychlor [1]	ND	0.31	mg/Kg dry	5		SW-846 8081B	6/3/19	6/6/19 22:30	TG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	78.1	30-150						6/6/19 22:30	
Decachlorobiphenyl [2]	73.6	30-150						6/6/19 22:30	
Tetrachloro-m-xylene [1]	65.9	30-150						6/6/19 22:30	
Tetrachloro-m-xylene [2]	61.4	30-150						6/6/19 22:30	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-2 (0-2)

Sampled: 5/28/2019 10:00

Sample ID: 19E1819-13

Sample Matrix: Soil

## Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	160	µg/kg dry	5	DL-03	SW-846 8151A	6/4/19	6/10/19 6:15	TG
2,4-DB [1]	ND	160	µg/kg dry	5	DL-03	SW-846 8151A	6/4/19	6/10/19 6:15	TG
2,4,5-TP (Silvex) [1]	ND	16	µg/kg dry	5	DL-03	SW-846 8151A	6/4/19	6/10/19 6:15	TG
2,4,5-T [1]	ND	16	µg/kg dry	5	DL-03	SW-846 8151A	6/4/19	6/10/19 6:15	TG
Dalapon [1]	ND	390	µg/kg dry	5	DL-03	SW-846 8151A	6/4/19	6/10/19 6:15	TG
Dicamba [1]	ND	16	µg/kg dry	5	DL-03	SW-846 8151A	6/4/19	6/10/19 6:15	TG
Dichloroprop [1]	ND	160	µg/kg dry	5	DL-03	SW-846 8151A	6/4/19	6/10/19 6:15	TG
Dinoseb [1]	ND	78	µg/kg dry	5	DL-03	SW-846 8151A	6/4/19	6/10/19 6:15	TG
MCPA [1]	ND	16000	µg/kg dry	5	DL-03	SW-846 8151A	6/4/19	6/10/19 6:15	TG
MCPP [1]	ND	16000	µg/kg dry	5	DL-03	SW-846 8151A	6/4/19	6/10/19 6:15	TG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	74.3	30-150	DL-03						
2,4-Dichlorophenylacetic acid [2]	82.4	30-150	DL-03						

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-2 (0-2)

Sampled: 5/28/2019 10:00

Sample ID: 19E1819-13

Sample Matrix: Soil

Sample Flags: O-32

## Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 21:47	AYH
Aroclor-1221 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 21:47	AYH
Aroclor-1232 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 21:47	AYH
Aroclor-1242 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 21:47	AYH
Aroclor-1248 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 21:47	AYH
Aroclor-1254 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 21:47	AYH
Aroclor-1260 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 21:47	AYH
Aroclor-1262 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 21:47	AYH
Aroclor-1268 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 21:47	AYH
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	89.1		30-150				6/5/19 21:47		
Decachlorobiphenyl [2]	97.4		30-150				6/5/19 21:47		
Tetrachloro-m-xylene [1]	94.0		30-150				6/5/19 21:47		
Tetrachloro-m-xylene [2]	94.6		30-150				6/5/19 21:47		

Project Location: Beaver St., Waltham, MA 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332  
Sample Description:

Date Received: 5/31/2019

Work Order: 19E1819

Field Sample #: GP1-2 (0-2)

Sampled: 5/28/2019 10:00

Sample ID: 19E1819-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	79.7		% Wt	1		SM 2540G	6/5/19	6/5/19 15:48	JDN

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-6 (3-5)

Sampled: 5/28/2019 13:50

Sample ID: 19E1819-14

Sample Matrix: Soil

## Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
alpha-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
beta-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
delta-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
gamma-BHC (Lindane) [1]	ND	0.0023	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Chlordane [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
4,4'-DDD [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
4,4'-DDE [1]	0.027	0.0047	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
4,4'-DDT [2]	0.020	0.0047	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Dieldrin [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Endosulfan I [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Endosulfan II [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Endosulfan sulfate [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Endrin [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Endrin ketone [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Heptachlor [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Heptachlor epoxide [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Hexachlorobenzene [1]	ND	0.0070	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Methoxychlor [1]	ND	0.059	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 22:57	TG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	84.1	30-150						6/6/19 22:57	
Decachlorobiphenyl [2]	85.7	30-150						6/6/19 22:57	
Tetrachloro-m-xylene [1]	83.5	30-150						6/6/19 22:57	
Tetrachloro-m-xylene [2]	77.1	30-150						6/6/19 22:57	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-6 (3-5)

Sampled: 5/28/2019 13:50

Sample ID: 19E1819-14

Sample Matrix: Soil

## Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	29	µg/kg dry	1		SW-846 8151A	6/4/19	6/10/19 6:54	TG
2,4-DB [1]	ND	29	µg/kg dry	1		SW-846 8151A	6/4/19	6/10/19 6:54	TG
2,4,5-TP (Silvex) [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	6/4/19	6/10/19 6:54	TG
2,4,5-T [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	6/4/19	6/10/19 6:54	TG
Dalapon [1]	ND	73	µg/kg dry	1		SW-846 8151A	6/4/19	6/10/19 6:54	TG
Dicamba [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	6/4/19	6/10/19 6:54	TG
Dichloroprop [1]	ND	29	µg/kg dry	1		SW-846 8151A	6/4/19	6/10/19 6:54	TG
Dinoseb [1]	ND	15	µg/kg dry	1		SW-846 8151A	6/4/19	6/10/19 6:54	TG
MCPA [1]	ND	2900	µg/kg dry	1		SW-846 8151A	6/4/19	6/10/19 6:54	TG
MCPP [1]	ND	2900	µg/kg dry	1		SW-846 8151A	6/4/19	6/10/19 6:54	TG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	79.9	30-150						6/10/19 6:54	
2,4-Dichlorophenylacetic acid [2]	84.0	30-150						6/10/19 6:54	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-6 (3-5)

Sampled: 5/28/2019 13:50

Sample ID: 19E1819-14

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:00	AYH
Aroclor-1221 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:00	AYH
Aroclor-1232 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:00	AYH
Aroclor-1242 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:00	AYH
Aroclor-1248 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:00	AYH
Aroclor-1254 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:00	AYH
Aroclor-1260 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:00	AYH
Aroclor-1262 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:00	AYH
Aroclor-1268 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:00	AYH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	82.2	30-150							
Decachlorobiphenyl [2]	92.1	30-150							
Tetrachloro-m-xylene [1]	82.4	30-150							
Tetrachloro-m-xylene [2]	83.4	30-150							

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-6 (3-5)

Sampled: 5/28/2019 13:50

Sample ID: 19E1819-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.4		% Wt	1		SM 2540G	6/5/19	6/5/19 15:48	JDN



39 Spruce Street \* East Longmeadow, MA 01026 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-7 (3-5)

Sampled: 5/28/2019 14:55

Sample ID: 19E1819-15

Sample Matrix: Soil

## Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.0070	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
alpha-BHC [1]	ND	0.0070	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
beta-BHC [1]	ND	0.0070	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
delta-BHC [1]	ND	0.0070	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
gamma-BHC (Lindane) [1]	ND	0.0028	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
Chlordane [1]	0.11	0.028	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
4,4'-DDD [2]	0.44	0.22	mg/Kg dry	40		SW-846 8081B	6/3/19	6/7/19 8:33	TG
4,4'-DDE [1]	5.2	0.22	mg/Kg dry	40		SW-846 8081B	6/3/19	6/7/19 8:33	TG
4,4'-DDT [1]	12	0.44	mg/Kg dry	80		SW-846 8081B	6/3/19	6/7/19 11:14	TG
Dieldrin [1]	0.092	0.0056	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
Endosulfan I [1]	ND	0.0070	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
Endosulfan II [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
Endosulfan sulfate [1]	ND	0.011	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
Endrin [1]	0.035	0.011	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
Endrin ketone [1]	0.013	0.011	mg/Kg dry	1	P-02	SW-846 8081B	6/3/19	6/6/19 23:23	TG
Heptachlor [1]	ND	0.0070	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
Heptachlor epoxide [2]	0.0083	0.0070	mg/Kg dry	1	P-02	SW-846 8081B	6/3/19	6/6/19 23:23	TG
Hexachlorobenzene [1]	ND	0.0083	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
Methoxychlor [1]	ND	0.070	mg/Kg dry	1		SW-846 8081B	6/3/19	6/6/19 23:23	TG
<b>Surrogates</b>	<b>% Recovery</b>	<b>Recovery Limits</b>	<b>Flag/Qual</b>						
Decachlorobiphenyl [1]	73.1	30-150						6/6/19 23:23	
Decachlorobiphenyl [2]	80.5	30-150						6/6/19 23:23	
Tetrachloro-m-xylene [1]	66.3	30-150						6/6/19 23:23	
Tetrachloro-m-xylene [2]	59.7	30-150						6/6/19 23:23	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-7 (3-5)

Sampled: 5/28/2019 14:55

Sample ID: 19E1819-15

Sample Matrix: Soil

Sample Flags: DL-03

## Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	170	µg/kg dry	5		SW-846 8151A	6/4/19	6/10/19 7:32	TG
2,4-DB [1]	ND	170	µg/kg dry	5		SW-846 8151A	6/4/19	6/10/19 7:32	TG
2,4,5-TP (Silvex) [1]	ND	17	µg/kg dry	5		SW-846 8151A	6/4/19	6/10/19 7:32	TG
2,4,5-T [1]	ND	17	µg/kg dry	5		SW-846 8151A	6/4/19	6/10/19 7:32	TG
Dalapon [1]	ND	430	µg/kg dry	5		SW-846 8151A	6/4/19	6/10/19 7:32	TG
Dicamba [1]	ND	17	µg/kg dry	5		SW-846 8151A	6/4/19	6/10/19 7:32	TG
Dichloroprop [1]	ND	170	µg/kg dry	5		SW-846 8151A	6/4/19	6/10/19 7:32	TG
Dinoseb [1]	ND	86	µg/kg dry	5		SW-846 8151A	6/4/19	6/10/19 7:32	TG
MCPA [1]	ND	17000	µg/kg dry	5		SW-846 8151A	6/4/19	6/10/19 7:32	TG
MCPP [1]	ND	17000	µg/kg dry	5		SW-846 8151A	6/4/19	6/10/19 7:32	TG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	70.3	30-150						6/10/19 7:32	
2,4-Dichlorophenylacetic acid [2]	81.3	30-150						6/10/19 7:32	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-7 (3-5)

Sampled: 5/28/2019 14:55

Sample ID: 19E1819-15

Sample Matrix: Soil

Sample Flags: O-32

## Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:13	AYH
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:13	AYH
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:13	AYH
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:13	AYH
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:13	AYH
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:13	AYH
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:13	AYH
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:13	AYH
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	4		SW-846 8082A	6/3/19	6/5/19 22:13	AYH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	81.9	30-150							
Decachlorobiphenyl [2]	95.1	30-150							
Tetrachloro-m-xylene [1]	93.2	30-150							
Tetrachloro-m-xylene [2]	94.3	30-150							

39 Spruce Street • East Longmeadow, MA 01028 • FAX 413/525-6405 • TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19E1819

Date Received: 5/31/2019

Field Sample #: GP1-7 (3-5)

Sampled: 5/28/2019 14:55

Sample ID: 19E1819-15

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	71.9		% Wt	1		SM 2540G	6/5/19	6/5/19 15:48	JDN

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

### Sample Extraction Data

Prep Method: SW-846 3546-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19E1819-01 [GP1-1 (11-13)]	B232351	20.0	2.00	06/03/19
19E1819-02 [GP1-2 (11-13)]	B232351	20.2	2.00	06/03/19
19E1819-03 [GP1-3 (11-13)]	B232351	20.0	2.00	06/03/19
19E1819-04 [GP1-4 (11-13)]	B232351	20.0	2.00	06/03/19
19E1819-05 [GP1-5 (11-13)]	B232351	20.0	2.00	06/03/19
19E1819-06 [GP1-6 (11-13)]	B232351	20.2	2.00	06/03/19
19E1819-07 [GP1-7 (10-12)]	B232351	20.2	2.00	06/03/19
19E1819-08 [GP1-8 (10-12)]	B232351	20.1	2.00	06/03/19
19E1819-09 [GP1-9 (11-13)]	B232351	20.0	2.00	06/03/19
19E1819-10 [GP2-1 (6-8)]	B232351	20.0	2.00	06/03/19
19E1819-11 [GP2-2 (7-9)]	B232351	20.3	2.00	06/03/19
19E1819-12 [GP2-3 (7-9)]	B232351	20.3	2.00	06/03/19

Prep Method: MA VPH-MADEP-VPH-Feb 2018 Rev 2.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19E1819-08 [GP1-8 (10-12)]	B232287	6.10	6.80	06/03/19
19E1819-09 [GP1-9 (11-13)]	B232287	21.5	16.1	06/03/19
19E1819-10 [GP2-1 (6-8)]	B232287	6.30	5.20	06/03/19
19E1819-11 [GP2-2 (7-9)]	B232287	18.0	15.7	06/03/19
19E1819-12 [GP2-3 (7-9)]	B232287	7.10	5.60	06/03/19

Prep Method: MA VPH-MADEP-VPH-Feb 2018 Rev 2.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19E1819-01 [GP1-1 (11-13)]	B232289	20.9	15.8	06/03/19
19E1819-02 [GP1-2 (11-13)]	B232289	19.5	16.5	06/03/19
19E1819-03 [GP1-3 (11-13)]	B232289	7.40	5.30	06/03/19
19E1819-04 [GP1-4 (11-13)]	B232289	20.9	15.6	06/03/19
19E1819-05 [GP1-5 (11-13)]	B232289	21.2	16.1	06/03/19
19E1819-06 [GP1-6 (11-13)]	B232289	7.50	5.40	06/03/19
19E1819-07 [GP1-7 (10-12)]	B232289	18.6	25.6	06/03/19

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
19E1819-01 [GP1-1 (11-13)]	B232510	06/05/19
19E1819-02 [GP1-2 (11-13)]	B232510	06/05/19
19E1819-03 [GP1-3 (11-13)]	B232510	06/05/19
19E1819-04 [GP1-4 (11-13)]	B232510	06/05/19
19E1819-05 [GP1-5 (11-13)]	B232510	06/05/19
19E1819-06 [GP1-6 (11-13)]	B232510	06/05/19
19E1819-07 [GP1-7 (10-12)]	B232510	06/05/19
19E1819-08 [GP1-8 (10-12)]	B232510	06/05/19
19E1819-09 [GP1-9 (11-13)]	B232510	06/05/19
19E1819-10 [GP2-1 (6-8)]	B232510	06/05/19
19E1819-11 [GP2-2 (7-9)]	B232510	06/05/19
19E1819-12 [GP2-3 (7-9)]	B232510	06/05/19
19E1819-13 [GP1-2 (0-2)]	B232510	06/05/19
19E1819-14 [GP1-6 (3-5)]	B232510	06/05/19
19E1819-15 [GP1-7 (3-5)]	B232510	06/05/19

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

### Sample Extraction Data

Prep Method: SW-846 3050B-SW-846 6010D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19E1819-01 [GP1-1 (11-13)]	B232592	1.48	50.0	06/05/19
19E1819-02 [GP1-2 (11-13)]	B232592	1.51	50.0	06/05/19
19E1819-03 [GP1-3 (11-13)]	B232592	1.54	50.0	06/05/19
19E1819-04 [GP1-4 (11-13)]	B232592	1.49	50.0	06/05/19
19E1819-05 [GP1-5 (11-13)]	B232592	1.56	50.0	06/05/19
19E1819-06 [GP1-6 (11-13)]	B232592	1.54	50.0	06/05/19
19E1819-07 [GP1-7 (10-12)]	B232592	1.55	50.0	06/05/19
19E1819-08 [GP1-8 (10-12)]	B232592	1.55	50.0	06/05/19
19E1819-09 [GP1-9 (11-13)]	B232592	1.54	50.0	06/05/19
19E1819-10 [GP2-1 (6-8)]	B232592	1.53	50.0	06/05/19
19E1819-11 [GP2-2 (7-9)]	B232592	1.53	50.0	06/05/19
19E1819-12 [GP2-3 (7-9)]	B232592	1.51	50.0	06/05/19

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19E1819-01 [GP1-1 (11-13)]	B232653	0.609	50.0	06/06/19
19E1819-02 [GP1-2 (11-13)]	B232653	0.616	50.0	06/06/19
19E1819-03 [GP1-3 (11-13)]	B232653	0.624	50.0	06/06/19
19E1819-04 [GP1-4 (11-13)]	B232653	0.633	50.0	06/06/19
19E1819-05 [GP1-5 (11-13)]	B232653	0.607	50.0	06/06/19
19E1819-06 [GP1-6 (11-13)]	B232653	0.626	50.0	06/06/19
19E1819-07 [GP1-7 (10-12)]	B232653	0.613	50.0	06/06/19
19E1819-08 [GP1-8 (10-12)]	B232653	0.596	50.0	06/06/19
19E1819-09 [GP1-9 (11-13)]	B232653	0.606	50.0	06/06/19
19E1819-10 [GP2-1 (6-8)]	B232653	0.591	50.0	06/06/19
19E1819-11 [GP2-2 (7-9)]	B232653	0.585	50.0	06/06/19
19E1819-12 [GP2-3 (7-9)]	B232653	0.619	50.0	06/06/19

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19E1819-13 [GP1-2 (0-2)]	B232333	10.1	10.0	06/03/19
19E1819-14 [GP1-6 (3-5)]	B232333	10.0	10.0	06/03/19
19E1819-15 [GP1-7 (3-5)]	B232333	10.0	10.0	06/03/19

Prep Method: SW-846 3540C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19E1819-13 [GP1-2 (0-2)]	B232317	10.3	10.0	06/03/19
19E1819-14 [GP1-6 (3-5)]	B232317	10.2	10.0	06/03/19
19E1819-15 [GP1-7 (3-5)]	B232317	10.3	10.0	06/03/19

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19E1819-13 [GP1-2 (0-2)]	B232364	20.2	5.00	06/04/19
19E1819-14 [GP1-6 (3-5)]	B232364	20.0	5.00	06/04/19
19E1819-15 [GP1-7 (3-5)]	B232364	20.2	5.00	06/04/19

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

### Sample Extraction Data

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19E1819-01 [GP1-1 (11-13)]	B232325	6.73	10.0	06/03/19
19E1819-02 [GP1-2 (11-13)]	B232325	6.68	10.0	06/03/19
19E1819-03 [GP1-3 (11-13)]	B232325	8.20	10.0	06/03/19
19E1819-04 [GP1-4 (11-13)]	B232325	8.32	10.0	06/03/19

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19E1819-05 [GP1-5 (11-13)]	B232391	7.62	10.0	06/04/19
19E1819-06 [GP1-6 (11-13)]	B232391	6.73	10.0	06/04/19
19E1819-07 [GP1-7 (10-12)]	B232391	9.49	10.0	06/04/19
19E1819-08 [GP1-8 (10-12)]	B232391	6.13	10.0	06/04/19
19E1819-09 [GP1-9 (11-13)]	B232391	6.64	10.0	06/04/19
19E1819-10 [GP2-1 (6-8)]	B232391	6.86	10.0	06/04/19
19E1819-11 [GP2-2 (7-9)]	B232391	6.94	10.0	06/04/19
19E1819-12 [GP2-3 (7-9)]	B232391	7.56	10.0	06/04/19

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232325 - SW-846 5035										
Blank (B232325-BLK1)										
Prepared & Analyzed: 06/03/19										
Acetone	ND	0.10	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							V-34
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.010	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.010	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							V-16
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.010	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							V-05



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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232325 - SW-846 5035										
Blank (B232325-BLK1)										
Prepared & Analyzed: 06/03/19										
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							V-05
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0541		mg/Kg wet	0.0500		108	70-130			
Surrogate: Toluene-d8	0.0513		mg/Kg wet	0.0500		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.0512		mg/Kg wet	0.0500		102	70-130			
LCS (B232325-BS1)										
Prepared & Analyzed: 06/03/19										
Acetone	0.246	0.10	mg/Kg wet	0.200		123	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130			
Benzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130			
Bromobenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Bromochloromethane	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130			
Bromodichloromethane	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130			
Bromoform	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130			
Bromomethane	0.0149	0.010	mg/Kg wet	0.0200		74.5	40-160			
2-Butanone (MEK)	0.192	0.040	mg/Kg wet	0.200		95.8	40-160			V-34 †
n-Butylbenzene	0.0178	0.0020	mg/Kg wet	0.0200		88.9	70-130			†
sec-Butylbenzene	0.0182	0.0020	mg/Kg wet	0.0200		90.8	70-130			
tert-Butylbenzene	0.0180	0.0020	mg/Kg wet	0.0200		89.9	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0194	0.0010	mg/Kg wet	0.0200		97.0	70-130			
Carbon Disulfide	0.0261	0.0060	mg/Kg wet	0.0200		130	70-130			
Carbon Tetrachloride	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130			
Chlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130			V-20
Chlorodibromomethane	0.0255	0.0010	mg/Kg wet	0.0200		128	70-130			
Chloroethane	0.0235	0.010	mg/Kg wet	0.0200		117	70-130			
Chloroform	0.0210	0.0040	mg/Kg wet	0.0200		105	70-130			
Chloromethane	0.0158	0.010	mg/Kg wet	0.0200		78.8	40-160			†
2-Chlorotoluene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			
4-Chlorotoluene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130			
1,2-Dibromoethane (EDB)	0.0223	0.0010	mg/Kg wet	0.0200		112	70-130			
Bromomethane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2-Dichlorobenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.7	70-130			
1,3-Dichlorobenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130			
1,4-Dichlorobenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.0	70-130			

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232325 - SW-846 5035										
LCS (B232325-BS1)										
Prepared & Analyzed: 06/03/19										
Dichlorodifluoromethane (Freon 12)	0.0138	0.010	mg/Kg wet	0.0200		69.0	40-160			L-14 †
1,1-Dichloroethane	0.0193	0.0020	mg/Kg wet	0.0200		96.7	70-130			
1,2-Dichloroethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
1,1-Dichloroethylene	0.0242	0.0040	mg/Kg wet	0.0200		121	70-130			
cis-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130			
trans-1,2-Dichloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130			
1,2-Dichloropropane	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130			
1,3-Dichloropropane	0.0193	0.0010	mg/Kg wet	0.0200		96.6	70-130			
2,2-Dichloropropane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,1-Dichloropropene	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130			
cis-1,3-Dichloropropene	0.0193	0.0010	mg/Kg wet	0.0200		96.4	70-130			
trans-1,3-Dichloropropene	0.0229	0.0010	mg/Kg wet	0.0200		114	70-130			
Diethyl Ether	0.0215	0.010	mg/Kg wet	0.0200		108	70-130			
Diisopropyl Ether (DIPE)	0.0179	0.0010	mg/Kg wet	0.0200		89.5	70-130			
1,4-Dioxane	0.201	0.10	mg/Kg wet	0.200		101	40-160			V-16 †
Ethylbenzene	0.0198	0.0020	mg/Kg wet	0.0200		99.0	70-130			
Hexachlorobutadiene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130			
2-Hexanone (MBK)	0.196	0.020	mg/Kg wet	0.200		98.1	40-160			†
Isopropylbenzene (Cumene)	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
p-Propyltoluene (p-Cymene)	0.0184	0.0020	mg/Kg wet	0.0200		92.2	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0220	0.0040	mg/Kg wet	0.0200		110	70-130			
Methylene Chloride	0.0225	0.010	mg/Kg wet	0.0200		113	70-130			
4-Methyl-2-pentanone (MIBK)	0.197	0.020	mg/Kg wet	0.200		98.3	40-160			†
Naphthalene	0.0163	0.0040	mg/Kg wet	0.0200		81.5	70-130			V-05
n-Propylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Styrene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
1,1,1,2-Tetrachloroethane	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
1,1,2,2-Tetrachloroethane	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130			
Tetrachloroethylene	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130			
Tetrahydrofuran	0.0176	0.010	mg/Kg wet	0.0200		87.8	70-130			
Toluene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2,3-Trichlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130			
1,2,4-Trichlorobenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130			V-05
1,1,1-Trichloroethane	0.0245	0.0020	mg/Kg wet	0.0200		122	70-130			V-20
1,1,2-Trichloroethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Trichloroethylene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
Trichlorofluoromethane (Freon 11)	0.0246	0.010	mg/Kg wet	0.0200		123	70-130			V-20
1,2,3-Trichloropropane	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130			
1,2,4-Trimethylbenzene	0.0173	0.0020	mg/Kg wet	0.0200		86.5	70-130			
1,3,5-Trimethylbenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130			
Vinyl Chloride	0.0169	0.010	mg/Kg wet	0.0200		84.7	70-130			
m+p Xylene	0.0409	0.0040	mg/Kg wet	0.0400		102	70-130			
o-Xylene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0543		mg/Kg wet	0.0500		109	70-130			
Surrogate: Toluene-d8	0.0482		mg/Kg wet	0.0500		96.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.0570		mg/Kg wet	0.0500		114	70-130			

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232325 - SW-846 5035										
LCS Dup (B232325-BSD1)				Prepared & Analyzed: 06/03/19						
Acetone	0.243	0.10	mg/Kg wet	0.200		122	40-160	1.12	20	
tert-Amyl Methyl Ether (TAME)	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130	0.779	20	†
Benzene	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130	2.62	20	
Bromobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	9.32	20	
Bromochloromethane	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130	0.616	20	
Bromodichloromethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	1.12	20	
Bromoform	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	13.2	20	
Bromomethane	0.0149	0.010	mg/Kg wet	0.0200		74.3	40-160	0.282	20	
2-Butanone (MEK)	0.182	0.040	mg/Kg wet	0.200		91.0	40-160	5.15	20	V-34 †
n-Butylbenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.6	70-130	1.39	20	†
sec-Butylbenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.4	70-130	0.386	20	
tert-Butylbenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.1	70-130	1.98	20	
tert-Butyl Ethyl Ether (TBEE)	0.0188	0.0010	mg/Kg wet	0.0200		94.0	70-130	3.19	20	
Carbon Disulfide	0.0251	0.0060	mg/Kg wet	0.0200		126	70-130	3.72	20	
Carbon Tetrachloride	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	0.118	20	V-20
Chlorobenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130	0.166	20	
Chlorodibromomethane	0.0246	0.0010	mg/Kg wet	0.0200		123	70-130	3.83	20	
Chloroethane	0.0229	0.010	mg/Kg wet	0.0200		114	70-130	2.52	20	
Chloroform	0.0208	0.0040	mg/Kg wet	0.0200		104	70-130	1.23	20	
Chloromethane	0.0151	0.010	mg/Kg wet	0.0200		75.7	40-160	4.12	20	†
Chlorotoluene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	10.4	20	
4-Chlorotoluene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	8.42	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130	6.47	20	
1,2-Dibromoethane (EDB)	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130	9.43	20	
Dibromomethane	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	3.42	20	
1,2-Dichlorobenzene	0.0180	0.0020	mg/Kg wet	0.0200		89.8	70-130	2.07	20	
1,3-Dichlorobenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.6	70-130	1.01	20	
1,4-Dichlorobenzene	0.0171	0.0020	mg/Kg wet	0.0200		85.6	70-130	2.78	20	
Dichlorodifluoromethane (Freon 12)	0.0129	0.010	mg/Kg wet	0.0200		64.3	40-160	7.02	20	L-14 †
1,1-Dichloroethane	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	3.92	20	
1,2-Dichloroethane	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130	2.36	20	
1,1-Dichloroethylene	0.0239	0.0040	mg/Kg wet	0.0200		119	70-130	1.44	20	
cis-1,2-Dichloroethylene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	1.61	20	
trans-1,2-Dichloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130	0.606	20	
1,2-Dichloropropane	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130	1.12	20	
1,3-Dichloropropane	0.0195	0.0010	mg/Kg wet	0.0200		97.4	70-130	0.783	20	
2,2-Dichloropropane	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	5.28	20	
1,1-Dichloropropene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130	3.36	20	
cis-1,3-Dichloropropene	0.0193	0.0010	mg/Kg wet	0.0200		96.6	70-130	0.145	20	
trans-1,3-Dichloropropene	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130	11.1	20	
Diethyl Ether	0.0209	0.010	mg/Kg wet	0.0200		105	70-130	2.80	20	
Diisopropyl Ether (DIPE)	0.0175	0.0010	mg/Kg wet	0.0200		87.5	70-130	2.29	20	
1,4-Dioxane	0.181	0.10	mg/Kg wet	0.200		90.3	40-160	10.7	20	V-16 †
Ethylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130	4.79	20	
Hexachlorobutadiene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	4.49	20	
2-Hexanone (MBK)	0.198	0.020	mg/Kg wet	0.200		99.0	40-160	0.950	20	†
Isopropylbenzene (Cumene)	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	8.51	20	
Isopropyltoluene (p-Cymene)	0.0183	0.0020	mg/Kg wet	0.0200		91.6	70-130	0.620	20	
Methyl tert-Butyl Ether (MTBE)	0.0214	0.0040	mg/Kg wet	0.0200		107	70-130	2.73	20	
Methylene Chloride	0.0209	0.010	mg/Kg wet	0.0200		104	70-130	7.52	20	
4-Methyl-2-pentanone (MIBK)	0.194	0.020	mg/Kg wet	0.200		96.8	40-160	1.50	20	†
Naphthalene	0.0149	0.0040	mg/Kg wet	0.0200		74.7	70-130	8.73	20	V-05

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232325 - SW-846 5035										
LCS Dup (B232325-BSD1)				Prepared & Analyzed: 06/03/19						
n-Propylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130	10.1	20	
Styrene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130	8.23	20	
1,1,1,2-Tetrachloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	6.37	20	
1,1,2,2-Tetrachloroethane	0.0189	0.0010	mg/Kg wet	0.0200		94.7	70-130	11.5	20	
Tetrachloroethylene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	3.52	20	
Tetrahydrofuran	0.0162	0.010	mg/Kg wet	0.0200		81.1	70-130	7.93	20	
Toluene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	3.79	20	
1,2,3-Trichlorobenzene	0.0164	0.0020	mg/Kg wet	0.0200		81.9	70-130	9.03	20	
1,2,4-Trichlorobenzene	0.0168	0.0020	mg/Kg wet	0.0200		83.8	70-130	10.9	20	V-05
1,1,1-Trichloroethane	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130	1.68	20	V-20
1,1,2-Trichloroethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	1.10	20	
Trichloroethylene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	0.870	20	
Trichlorofluoromethane (Freon 11)	0.0242	0.010	mg/Kg wet	0.0200		121	70-130	1.89	20	V-20
1,2,3-Trichloropropane	0.0179	0.0020	mg/Kg wet	0.0200		89.4	70-130	10.9	20	
1,2,4-Trimethylbenzene	0.0169	0.0020	mg/Kg wet	0.0200		84.4	70-130	2.42	20	
1,3,5-Trimethylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	7.65	20	
Vinyl Chloride	0.0170	0.010	mg/Kg wet	0.0200		85.0	70-130	0.365	20	
m+p Xylene	0.0396	0.0040	mg/Kg wet	0.0400		98.9	70-130	3.36	20	
o-Xylene	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130	8.91	20	
Surrogate: 1,2-Dichloroethane-d4	0.0523		mg/Kg wet	0.0500		105	70-130			
Surrogate: Toluene-d8	0.0489		mg/Kg wet	0.0500		97.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.0546		mg/Kg wet	0.0500		109	70-130			
Batch B232391 - SW-846 5035										
Blank (B232391-BLK1)				Prepared & Analyzed: 06/04/19						
Acetone	ND	0.10	mg/Kg wet							R-05
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							R-05
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.010	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
Dibromomethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232391 - SW-846 5035										
Blank (B232391-BLK1)										
Prepared & Analyzed: 06/04/19										
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.010	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							V-16
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.010	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							V-05
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0538		mg/Kg wet	0.0500		108	70-130			
Surrogate: Toluene-d8	0.0494		mg/Kg wet	0.0500		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.0514		mg/Kg wet	0.0500		103	70-130			

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232391 - SW-846 5035										
LCS (B232391-BS1)										
Prepared & Analyzed: 06/04/19										
Acetone	0.417	0.10	mg/Kg wet	0.200		208 *	40-160			L-07A, R-05 †
tert-Amyl Methyl Ether (TAME)	0.0222	0.0010	mg/Kg wet	0.0200		111	70-130			
Benzene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130			
Bromobenzene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
Bromochloromethane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Bromodichloromethane	0.0242	0.0020	mg/Kg wet	0.0200		121	70-130			
Bromoform	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
Bromomethane	0.0136	0.010	mg/Kg wet	0.0200		67.9	40-160			V-34 †
2-Butanone (MEK)	0.277	0.040	mg/Kg wet	0.200		139	40-160			R-05, L-14 †
n-Butylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130			
sec-Butylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
tert-Butylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0222	0.0010	mg/Kg wet	0.0200		111	70-130			
Carbon Disulfide	0.0266	0.0060	mg/Kg wet	0.0200		133 *	70-130			L-02, V-20
Carbon Tetrachloride	0.0260	0.0020	mg/Kg wet	0.0200		130	70-130			V-20
Chlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Chlorodibromomethane	0.0266	0.0010	mg/Kg wet	0.0200		133 *	70-130			L-07
Chloroethane	0.0237	0.010	mg/Kg wet	0.0200		118	70-130			
Chloroform	0.0237	0.0040	mg/Kg wet	0.0200		119	70-130			
Chloromethane	0.0146	0.010	mg/Kg wet	0.0200		72.9	40-160			†
2-Chlorotoluene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
4-Chlorotoluene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0184	0.0020	mg/Kg wet	0.0200		92.2	70-130			
1,2-Dibromoethane (EDB)	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130			
Dibromomethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2-Dichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		99.0	70-130			
1,3-Dichlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
1,4-Dichlorobenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130			
Dichlorodifluoromethane (Freon 12)	0.0120	0.010	mg/Kg wet	0.0200		60.2	40-160			L-14 †
1,1-Dichloroethane	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
1,2-Dichloroethane	0.0245	0.0020	mg/Kg wet	0.0200		123	70-130			V-20
1,1-Dichloroethylene	0.0254	0.0040	mg/Kg wet	0.0200		127	70-130			V-20
cis-1,2-Dichloroethylene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			
trans-1,2-Dichloroethylene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130			
1,2-Dichloropropane	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130			
1,3-Dichloropropane	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130			
2,2-Dichloropropane	0.0245	0.0020	mg/Kg wet	0.0200		123	70-130			
1,1-Dichloropropene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
cis-1,3-Dichloropropene	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130			
trans-1,3-Dichloropropene	0.0225	0.0010	mg/Kg wet	0.0200		113	70-130			
Diethyl Ether	0.0218	0.010	mg/Kg wet	0.0200		109	70-130			
Diisopropyl Ether (DIPE)	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130			
1,4-Dioxane	0.194	0.10	mg/Kg wet	0.200		97.2	40-160			V-16 †
Ethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130			
Hexachlorobutadiene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
2-Hexanone (MBK)	0.250	0.020	mg/Kg wet	0.200		125	40-160			†
Isopropylbenzene (Cumene)	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Isopropyltoluene (p-Cymene)	0.0197	0.0020	mg/Kg wet	0.0200		98.6	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0241	0.0040	mg/Kg wet	0.0200		120	70-130			
Methylene Chloride	0.0228	0.010	mg/Kg wet	0.0200		114	70-130			
4-Methyl-2-pentanone (MIBK)	0.219	0.020	mg/Kg wet	0.200		109	40-160			†
Naphthalene	0.0161	0.0040	mg/Kg wet	0.0200		80.5	70-130			V-05

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232391 - SW-846 5035										
LCS (B232391-BS1)										
Prepared & Analyzed: 06/04/19										
n-Propylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
Styrene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1,1,2-Tetrachloroethane	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
1,1,2,2-Tetrachloroethane	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130			
Tetrachloroethylene	0.0252	0.0020	mg/Kg wet	0.0200		126	70-130			
Tetrahydrofuran	0.0180	0.010	mg/Kg wet	0.0200		90.1	70-130			
Toluene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
1,2,3-Trichlorobenzene	0.0174	0.0020	mg/Kg wet	0.0200		86.8	70-130			
1,2,4-Trichlorobenzene	0.0174	0.0020	mg/Kg wet	0.0200		87.2	70-130			
1,1,1-Trichloroethane	0.0259	0.0020	mg/Kg wet	0.0200		129	70-130			V-20
1,1,2-Trichloroethane	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130			
Trichloroethylene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
Trichlorofluoromethane (Freon 11)	0.0242	0.010	mg/Kg wet	0.0200		121	70-130			V-20
1,2,3-Trichloropropane	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130			
1,2,4-Trimethylbenzene	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130			
1,3,5-Trimethylbenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
Vinyl Chloride	0.0169	0.010	mg/Kg wet	0.0200		84.3	70-130			
m+p Xylene	0.0411	0.0040	mg/Kg wet	0.0400		103	70-130			
o-Xylene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0528		mg/Kg wet	0.0500		106	70-130			
Surrogate: Toluene-d8	0.0506		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0538		mg/Kg wet	0.0500		108	70-130			
LCS Dup (B232391-BS1)										
Prepared & Analyzed: 06/04/19										
Acetone	0.315	0.10	mg/Kg wet	0.200		158	40-160	27.8 *	20	L-14, R-05 †
tert-Amyl Methyl Ether (TAME)	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130	6.15	20	
Benzene	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130	4.71	20	
Bromobenzene	0.0190	0.0020	mg/Kg wet	0.0200		95.1	70-130	7.56	20	
Bromochloromethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	1.07	20	
Bromodichloromethane	0.0239	0.0020	mg/Kg wet	0.0200		119	70-130	1.31	20	
Bromoform	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	2.97	20	
Bromomethane	0.0151	0.010	mg/Kg wet	0.0200		75.5	40-160	10.6	20	V-34 †
2-Butanone (MEK)	0.220	0.040	mg/Kg wet	0.200		110	40-160	23.0 *	20	R-05 †
n-Butylbenzene	0.0178	0.0020	mg/Kg wet	0.0200		89.1	70-130	7.53	20	
sec-Butylbenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130	5.15	20	
tert-Butylbenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130	7.17	20	
tert-Butyl Ethyl Ether (TBEE)	0.0211	0.0010	mg/Kg wet	0.0200		105	70-130	5.32	20	
Carbon Disulfide	0.0273	0.0060	mg/Kg wet	0.0200		136 *	70-130	2.57	20	L-02, V-20
Carbon Tetrachloride	0.0259	0.0020	mg/Kg wet	0.0200		129	70-130	0.547	20	V-20
Chlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130	3.52	20	
Chlorodibromomethane	0.0256	0.0010	mg/Kg wet	0.0200		128	70-130	3.77	20	
Chloroethane	0.0232	0.010	mg/Kg wet	0.0200		116	70-130	1.89	20	
Chloroform	0.0222	0.0040	mg/Kg wet	0.0200		111	70-130	6.46	20	
Chloromethane	0.0157	0.010	mg/Kg wet	0.0200		78.4	40-160	7.36	20	†
2-Chlorotoluene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130	5.86	20	
4-Chlorotoluene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	5.59	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0185	0.0020	mg/Kg wet	0.0200		92.4	70-130	0.163	20	
1,2-Dibromoethane (EDB)	0.0208	0.0010	mg/Kg wet	0.0200		104	70-130	2.62	20	
Bromomethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	2.56	20	
1,2-Dichlorobenzene	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130	9.39	20	
1,3-Dichlorobenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130	8.19	20	
1,4-Dichlorobenzene	0.0176	0.0020	mg/Kg wet	0.0200		87.8	70-130	6.12	20	

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232391 - SW-846 5035										
LCS Dup (B232391-BSD1)				Prepared & Analyzed: 06/04/19						
Dichlorodifluoromethane (Freon 12)	0.0136	0.010	mg/Kg wet	0.0200		67.8	40-160	11.8	20	L-14 †
1,1-Dichloroethane	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	2.77	20	
1,2-Dichloroethane	0.0239	0.0020	mg/Kg wet	0.0200		119	70-130	2.83	20	V-20
1,1-Dichloroethylene	0.0260	0.0040	mg/Kg wet	0.0200		130	70-130	2.41	20	V-20
cis-1,2-Dichloroethylene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	6.98	20	
trans-1,2-Dichloroethylene	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	5.69	20	
1,2-Dichloropropane	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130	0.298	20	
1,3-Dichloropropane	0.0190	0.0010	mg/Kg wet	0.0200		95.1	70-130	8.54	20	
2,2-Dichloropropane	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	5.86	20	
1,1-Dichloropropene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	8.30	20	
cis-1,3-Dichloropropene	0.0203	0.0010	mg/Kg wet	0.0200		101	70-130	3.29	20	
trans-1,3-Dichloropropene	0.0220	0.0010	mg/Kg wet	0.0200		110	70-130	2.41	20	
Diethyl Ether	0.0233	0.010	mg/Kg wet	0.0200		117	70-130	6.88	20	
Diisopropyl Ether (DIPE)	0.0213	0.0010	mg/Kg wet	0.0200		107	70-130	0.433	20	
1,4-Dioxane	0.203	0.10	mg/Kg wet	0.200		102	40-160	4.31	20	V-16 †
Ethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130	3.22	20	
Hexachlorobutadiene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	2.58	20	
2-Hexanone (MBK)	0.206	0.020	mg/Kg wet	0.200		103	40-160	19.2	20	†
Isopropylbenzene (Cumene)	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	3.46	20	
n-Isopropyltoluene (p-Cymene)	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130	6.02	20	
Methyl tert-Butyl Ether (MTBE)	0.0266	0.0040	mg/Kg wet	0.0200		133 *	70-130	10.0	20	L-07
Methylene Chloride	0.0247	0.010	mg/Kg wet	0.0200		124	70-130	8.03	20	
4-Methyl-2-pentanone (MIBK)	0.200	0.020	mg/Kg wet	0.200		99.9	40-160	8.99	20	†
Naphthalene	0.0158	0.0040	mg/Kg wet	0.0200		79.0	70-130	1.91	20	V-05
n-Propylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	3.65	20	
Styrene	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130	6.49	20	
1,1,1,2-Tetrachloroethane	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	6.73	20	
1,1,2,2-Tetrachloroethane	0.0183	0.0010	mg/Kg wet	0.0200		91.3	70-130	10.9	20	
Tetrachloroethylene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	8.68	20	
Tetrahydrofuran	0.0175	0.010	mg/Kg wet	0.0200		87.4	70-130	2.99	20	
Toluene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	5.19	20	
1,2,3-Trichlorobenzene	0.0173	0.0020	mg/Kg wet	0.0200		86.6	70-130	0.277	20	
1,2,4-Trichlorobenzene	0.0172	0.0020	mg/Kg wet	0.0200		86.2	70-130	1.22	20	
1,1,1-Trichloroethane	0.0248	0.0020	mg/Kg wet	0.0200		124	70-130	4.31	20	V-20
1,1,2-Trichloroethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	2.23	20	
Trichloroethylene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	2.20	20	
Trichlorofluoromethane (Freon 11)	0.0262	0.010	mg/Kg wet	0.0200		131 *	70-130	7.72	20	L-07, V-20
1,2,3-Trichloropropane	0.0171	0.0020	mg/Kg wet	0.0200		85.4	70-130	8.13	20	
1,2,4-Trimethylbenzene	0.0170	0.0020	mg/Kg wet	0.0200		85.2	70-130	7.52	20	
1,3,5-Trimethylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	4.23	20	
Vinyl Chloride	0.0178	0.010	mg/Kg wet	0.0200		89.0	70-130	5.33	20	
m+p Xylene	0.0398	0.0040	mg/Kg wet	0.0400		99.5	70-130	3.12	20	
o-Xylene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130	3.38	20	
Surrogate: 1,2-Dichloroethane-d4	0.0534		mg/Kg wet	0.0500		107	70-130			
Surrogate: Toluene-d8	0.0503		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0547		mg/Kg wet	0.0500		109	70-130			



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## QUALITY CONTROL

## Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232333 - SW-846 3546										
Blank (B232333-BLK1)										
Prepared: 06/03/19 Analyzed: 06/06/19										
Aldrin	ND	0.0050	mg/Kg wet							
Aldrin [2C]	ND	0.0050	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0040	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDE	ND	0.0040	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDT	ND	0.0040	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0040	mg/Kg wet							
Dieldrin	ND	0.0040	mg/Kg wet							
Dieldrin [2C]	ND	0.0040	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.176		mg/Kg wet	0.200		88.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.174		mg/Kg wet	0.200		87.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.179		mg/Kg wet	0.200		89.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.186		mg/Kg wet	0.200		93.0	30-150			

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## QUALITY CONTROL

## Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232333 - SW-846 3546										
LCS (B232333-BS1)										
Prepared: 06/03/19 Analyzed: 06/06/19										
Aldrin	0.089	0.0050	mg/Kg wet	0.100		89.1	40-140			
Aldrin [2C]	0.089	0.0050	mg/Kg wet	0.100		89.4	40-140			
alpha-BHC	0.087	0.0050	mg/Kg wet	0.100		87.2	40-140			
alpha-BHC [2C]	0.093	0.0050	mg/Kg wet	0.100		92.6	40-140			
beta-BHC	0.083	0.0050	mg/Kg wet	0.100		82.9	40-140			
beta-BHC [2C]	0.082	0.0050	mg/Kg wet	0.100		82.0	40-140			
delta-BHC	0.076	0.0050	mg/Kg wet	0.100		76.2	40-140			
delta-BHC [2C]	0.083	0.0050	mg/Kg wet	0.100		83.5	40-140			
gamma-BHC (Lindane)	0.088	0.0020	mg/Kg wet	0.100		88.4	40-140			
gamma-BHC (Lindane) [2C]	0.090	0.0020	mg/Kg wet	0.100		90.5	40-140			
4,4'-DDD	0.089	0.0040	mg/Kg wet	0.100		88.7	40-140			
4,4'-DDD [2C]	0.091	0.0040	mg/Kg wet	0.100		91.1	40-140			
4,4'-DDE	0.090	0.0040	mg/Kg wet	0.100		90.4	40-140			
4,4'-DDE [2C]	0.091	0.0040	mg/Kg wet	0.100		91.2	40-140			
4,4'-DDT	0.088	0.0040	mg/Kg wet	0.100		88.0	40-140			
4,4'-DDT [2C]	0.085	0.0040	mg/Kg wet	0.100		84.7	40-140			
Dieldrin	0.088	0.0040	mg/Kg wet	0.100		88.4	40-140			
Dieldrin [2C]	0.088	0.0040	mg/Kg wet	0.100		88.4	40-140			
Endosulfan I	0.086	0.0050	mg/Kg wet	0.100		85.8	40-140			
Endosulfan I [2C]	0.087	0.0050	mg/Kg wet	0.100		86.7	40-140			
Endosulfan II	0.078	0.0080	mg/Kg wet	0.100		78.1	40-140			
Endosulfan II [2C]	0.079	0.0080	mg/Kg wet	0.100		78.6	40-140			
Endosulfan Sulfate	0.088	0.0080	mg/Kg wet	0.100		88.1	40-140			
Endosulfan Sulfate [2C]	0.086	0.0080	mg/Kg wet	0.100		86.0	40-140			
Endrin	0.089	0.0080	mg/Kg wet	0.100		88.6	40-140			
Endrin [2C]	0.087	0.0080	mg/Kg wet	0.100		86.8	40-140			
Endrin Ketone	0.085	0.0080	mg/Kg wet	0.100		84.7	40-140			
Endrin Ketone [2C]	0.083	0.0080	mg/Kg wet	0.100		82.9	40-140			
Heptachlor	0.066	0.0050	mg/Kg wet	0.100		65.8	40-140			
Heptachlor [2C]	0.088	0.0050	mg/Kg wet	0.100		88.5	40-140			
Heptachlor Epoxide	0.085	0.0050	mg/Kg wet	0.100		85.1	40-140			
Heptachlor Epoxide [2C]	0.085	0.0050	mg/Kg wet	0.100		84.8	40-140			
Hexachlorobenzene	0.10	0.0060	mg/Kg wet	0.100		101	40-140			
Hexachlorobenzene [2C]	0.094	0.0060	mg/Kg wet	0.100		93.5	40-140			
Methoxychlor	0.084	0.050	mg/Kg wet	0.100		84.2	40-140			
Methoxychlor [2C]	0.084	0.050	mg/Kg wet	0.100		83.9	40-140			
Surrogate: Decachlorobiphenyl	0.182		mg/Kg wet	0.200		91.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.180		mg/Kg wet	0.200		89.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.184		mg/Kg wet	0.200		92.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.192		mg/Kg wet	0.200		96.1	30-150			
LCS Dup (B232333-BSD1)										
Prepared: 06/03/19 Analyzed: 06/06/19										
Aldrin	0.092	0.0050	mg/Kg wet	0.100		92.0	40-140	3.19	30	
Aldrin [2C]	0.093	0.0050	mg/Kg wet	0.100		92.7	40-140	3.63	30	
alpha-BHC	0.089	0.0050	mg/Kg wet	0.100		89.2	40-140	2.37	30	
alpha-BHC [2C]	0.096	0.0050	mg/Kg wet	0.100		95.8	40-140	3.39	30	
beta-BHC	0.085	0.0050	mg/Kg wet	0.100		84.8	40-140	2.26	30	
beta-BHC [2C]	0.084	0.0050	mg/Kg wet	0.100		84.0	40-140	2.40	30	
delta-BHC	0.078	0.0050	mg/Kg wet	0.100		77.9	40-140	2.27	30	
delta-BHC [2C]	0.085	0.0050	mg/Kg wet	0.100		85.4	40-140	2.35	30	
gamma-BHC (Lindane)	0.091	0.0020	mg/Kg wet	0.100		90.5	40-140	2.41	30	
gamma-BHC (Lindane) [2C]	0.093	0.0020	mg/Kg wet	0.100		92.6	40-140	2.35	30	

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## QUALITY CONTROL

## Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232333 - SW-846 3546										
LCS Dup (B232333-BSD1) Prepared: 06/03/19 Analyzed: 06/06/19										
4,4'-DDD	0.091	0.0040	mg/Kg wet	0.100		91.4	40-140	2.99	30	
4,4'-DDD [2C]	0.094	0.0040	mg/Kg wet	0.100		93.9	40-140	3.10	30	
4,4'-DDE	0.094	0.0040	mg/Kg wet	0.100		93.8	40-140	3.67	30	
4,4'-DDE [2C]	0.094	0.0040	mg/Kg wet	0.100		94.3	40-140	3.33	30	
4,4'-DDT	0.090	0.0040	mg/Kg wet	0.100		90.3	40-140	2.66	30	
4,4'-DDT [2C]	0.088	0.0040	mg/Kg wet	0.100		87.9	40-140	3.71	30	
Dieldrin	0.091	0.0040	mg/Kg wet	0.100		91.0	40-140	2.96	30	
Dieldrin [2C]	0.091	0.0040	mg/Kg wet	0.100		91.2	40-140	3.14	30	
Endosulfan I	0.088	0.0050	mg/Kg wet	0.100		88.3	40-140	2.86	30	
Endosulfan I [2C]	0.090	0.0050	mg/Kg wet	0.100		90.5	40-140	4.22	30	
Endosulfan II	0.080	0.0080	mg/Kg wet	0.100		80.5	40-140	2.96	30	
Endosulfan II [2C]	0.081	0.0080	mg/Kg wet	0.100		81.0	40-140	2.98	30	
Endosulfan Sulfate	0.090	0.0080	mg/Kg wet	0.100		89.7	40-140	1.86	30	
Endosulfan Sulfate [2C]	0.088	0.0080	mg/Kg wet	0.100		87.6	40-140	1.86	30	
Endrin	0.091	0.0080	mg/Kg wet	0.100		91.0	40-140	2.67	30	
Endrin [2C]	0.090	0.0080	mg/Kg wet	0.100		89.6	40-140	3.17	30	
Endrin Ketone	0.087	0.0080	mg/Kg wet	0.100		86.5	40-140	2.20	30	
Endrin Ketone [2C]	0.085	0.0080	mg/Kg wet	0.100		84.5	40-140	1.97	30	
Heptachlor	0.068	0.0050	mg/Kg wet	0.100		68.2	40-140	3.57	30	
Heptachlor [2C]	0.092	0.0050	mg/Kg wet	0.100		92.3	40-140	4.23	30	
γ-ptachlor Epoxide	0.088	0.0050	mg/Kg wet	0.100		87.8	40-140	3.07	30	
γ-ptachlor Epoxide [2C]	0.087	0.0050	mg/Kg wet	0.100		87.5	40-140	3.04	30	
Hexachlorobenzene	0.11	0.0060	mg/Kg wet	0.100		105	40-140	3.54	30	
Hexachlorobenzene [2C]	0.097	0.0060	mg/Kg wet	0.100		97.2	40-140	3.83	30	
Methoxychlor	0.087	0.050	mg/Kg wet	0.100		86.8	40-140	2.98	30	
Methoxychlor [2C]	0.088	0.050	mg/Kg wet	0.100		87.8	40-140	4.49	30	
Surrogate: Decachlorobiphenyl	0.189		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.187		mg/Kg wet	0.200		93.7	30-150			
Surrogate: Tetrachloro-m-xylene	0.192		mg/Kg wet	0.200		96.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.196		mg/Kg wet	0.200		97.8	30-150			

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## QUALITY CONTROL

## Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232364 - SW-846 8151										
Blank (B232364-BLK1)										
Prepared: 06/04/19 Analyzed: 06/10/19										
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	74.6		µg/kg wet	95.2		78.3	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	75.2		µg/kg wet	95.2		79.0	30-150			
LCS (B232364-BS1)										
Prepared: 06/04/19 Analyzed: 06/10/19										
2,4-D	117	25	µg/kg wet	125		93.8	40-140			
2,4-D [2C]	118	25	µg/kg wet	125		94.5	40-140			
2,4-DB	121	25	µg/kg wet	125		97.1	40-140			
2,4-DB [2C]	120	25	µg/kg wet	125		96.0	40-140			
2,4,5-TP (Silvex)	12.4	2.5	µg/kg wet	12.5		99.1	40-140			
2,4,5-TP (Silvex) [2C]	12.2	2.5	µg/kg wet	12.5		97.6	40-140			
2,4,5-T	12.3	2.5	µg/kg wet	12.5		98.4	40-140			
2,4,5-T [2C]	26.7	2.5	µg/kg wet	12.5		214 *	40-140			
Dalapon	214	62	µg/kg wet	312		68.4	40-140			L-11
Dalapon [2C]	214	62	µg/kg wet	312		68.6	40-140			
Dicamba	11.3	2.5	µg/kg wet	12.5		90.1	40-140			
Dicamba [2C]	11.4	2.5	µg/kg wet	12.5		90.9	40-140			
Dichloroprop	122	25	µg/kg wet	125		97.5	40-140			
Dichloroprop [2C]	125	25	µg/kg wet	125		100	40-140			
Dinoseb	19.0	12	µg/kg wet	62.5		30.4	0-42.4			
Dinoseb [2C]	21.6	12	µg/kg wet	62.5		34.6	0-41.1			
MCPA	10800	2500	µg/kg wet	12500		86.4	40-140			
MCPA [2C]	12100	2500	µg/kg wet	12500		96.5	40-140			
MCPP	11600	2500	µg/kg wet	12500		92.5	40-140			
MCPP [2C]	11200	2500	µg/kg wet	12500		89.4	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	91.6		µg/kg wet	100		91.6	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	90.2		µg/kg wet	100		90.2	30-150			

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## QUALITY CONTROL

## Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232364 - SW-846 8151										
LCS Dup (B232364-BSD1)										
Prepared: 06/04/19 Analyzed: 06/10/19										
2,4-D	105	25	µg/kg wet	125		84.3	40-140	10.7	30	
2,4-D [2C]	109	25	µg/kg wet	125		87.2	40-140	8.04	30	
2,4-DB	104	25	µg/kg wet	125		83.0	40-140	15.7	30	
2,4-DB [2C]	109	25	µg/kg wet	125		87.1	40-140	9.70	30	
2,4,5-TP (Silvex)	11.0	2.5	µg/kg wet	12.5		87.8	40-140	12.2	30	
2,4,5-TP (Silvex) [2C]	10.8	2.5	µg/kg wet	12.5		86.7	40-140	11.8	30	
2,4,5-T	11.1	2.5	µg/kg wet	12.5		89.2	40-140	9.86	30	
2,4,5-T [2C]	24.8	2.5	µg/kg wet	12.5		198	40-140	7.57	30	
Dalapon	207	62	µg/kg wet	312		66.2	40-140	3.27	30	L-11
Dalapon [2C]	208	62	µg/kg wet	312		66.5	40-140	3.13	30	
Dicamba	10.4	2.5	µg/kg wet	12.5		83.4	40-140	7.77	30	
Dicamba [2C]	10.8	2.5	µg/kg wet	12.5		86.5	40-140	4.95	30	
Dichloroprop	110	25	µg/kg wet	125		88.2	40-140	10.0	30	
Dichloroprop [2C]	114	25	µg/kg wet	125		91.3	40-140	9.11	30	
Dinoseb	17.6	12	µg/kg wet	62.5		28.2	0-42.4	7.57	30	
Dinoseb [2C]	21.7	12	µg/kg wet	62.5		34.8	0-41.1	0.444	30	
MCPA	9570	2500	µg/kg wet	12500		76.5	40-140	12.1	30	
MCPA [2C]	11000	2500	µg/kg wet	12500		87.9	40-140	9.33	30	
MCPP	10300	2500	µg/kg wet	12500		82.4	40-140	11.6	30	
MCPP [2C]	10100	2500	µg/kg wet	12500		80.6	40-140	10.4	30	
Surrogate: 2,4-Dichlorophenylacetic acid	82.8		µg/kg wet	100		82.8	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	84.0		µg/kg wet	100		84.0	30-150			
Matrix Spike (B232364-MS1)										
Source: 19E1819-14 Prepared: 06/04/19 Analyzed: 06/10/19										
2,4-D	120	29	µg/kg dry	146	ND	81.9	30-150			
2,4-D [2C]	124	29	µg/kg dry	146	ND	84.7	30-150			
2,4-DB	130	29	µg/kg dry	146	ND	88.9	30-150			
2,4-DB [2C]	142	29	µg/kg dry	146	ND	97.1	30-150			
2,4,5-TP (Silvex)	10.5	2.9	µg/kg dry	14.6	ND	72.1	30-150			
2,4,5-TP (Silvex) [2C]	12.3	2.9	µg/kg dry	14.6	ND	83.9	30-150			
2,4,5-T	11.7	2.9	µg/kg dry	14.6	ND	80.0	30-150			
2,4,5-T [2C]	33.6	2.9	µg/kg dry	14.6	ND	229	30-150			
Dalapon	271	73	µg/kg dry	366	ND	74.0	30-150			MS-12
Dalapon [2C]	270	73	µg/kg dry	366	ND	73.7	30-150			
Dicamba	11.7	2.9	µg/kg dry	14.6	ND	80.1	30-150			
Dicamba [2C]	12.2	2.9	µg/kg dry	14.6	ND	83.1	30-150			
Dichloroprop	129	29	µg/kg dry	146	ND	88.2	30-150			
Dichloroprop [2C]	127	29	µg/kg dry	146	ND	86.7	30-150			
Dinoseb	25.0	15	µg/kg dry	73.2	ND	34.1	10-150			
Dinoseb [2C]	26.8	15	µg/kg dry	73.2	ND	36.7	10-150			
MCPA	11400	2900	µg/kg dry	14600	ND	77.7	30-150			
MCPA [2C]	12100	2900	µg/kg dry	14600	ND	82.9	30-150			
MCPP	11900	2900	µg/kg dry	14600	ND	81.2	30-150			
MCPP [2C]	11700	2900	µg/kg dry	14600	ND	79.9	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid	100		µg/kg dry	117		85.4	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid	103		µg/kg dry	117		88.1	30-150			

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## QUALITY CONTROL

## Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232364 - SW-846 8151										
Matrix Spike Dup (B232364-MSD1)										
Source: 19E1819-14			Prepared: 06/04/19 Analyzed: 06/10/19							
2,4-D	120	29	µg/kg dry	146	ND	81.8	30-150	0.0855	30	
2,4-D [2C]	123	29	µg/kg dry	146	ND	83.9	30-150	0.932	30	
2,4-DB	130	29	µg/kg dry	146	ND	88.6	30-150	0.308	30	
2,4-DB [2C]	128	29	µg/kg dry	146	ND	87.7	30-150	10.1	30	
2,4,5-TP (Silvex)	10.6	2.9	µg/kg dry	14.6	ND	72.4	30-150	0.415	30	
2,4,5-TP (Silvex) [2C]	12.1	2.9	µg/kg dry	14.6	ND	82.7	30-150	1.42	30	
2,4,5-T	11.8	2.9	µg/kg dry	14.6	ND	80.4	30-150	0.479	30	
2,4,5-T [2C]	33.0	2.9	µg/kg dry	14.6	ND	226 *	30-150	1.70	30	MS-12
Dalapon	250	73	µg/kg dry	366	ND	68.4	30-150	7.89	30	
Dalapon [2C]	251	73	µg/kg dry	366	ND	68.7	30-150	6.94	30	
Dicamba	12.6	2.9	µg/kg dry	14.6	ND	86.1	30-150	7.22	30	
Dicamba [2C]	12.0	2.9	µg/kg dry	14.6	ND	82.0	30-150	1.29	30	
Dichloroprop	130	29	µg/kg dry	146	ND	88.7	30-150	0.545	30	
Dichloroprop [2C]	125	29	µg/kg dry	146	ND	85.2	30-150	1.81	30	
Dinoseb	23.3	15	µg/kg dry	73.2	ND	31.8	10-150	6.83	30	
Dinoseb [2C]	25.3	15	µg/kg dry	73.2	ND	34.6	10-150	5.98	30	
MCPA	11600	2900	µg/kg dry	14600	ND	79.5	30-150	2.37	30	
MCPA [2C]	11100	2900	µg/kg dry	14600	ND	76.1	30-150	8.54	30	
MCPP	12100	2900	µg/kg dry	14600	ND	82.3	30-150	1.36	30	
MCPP [2C]	11600	2900	µg/kg dry	14600	ND	79.5	30-150	0.429	30	
Surrogate: 2,4-Dichlorophenylacetic acid	97.8		µg/kg dry	117		83.5	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	99.1		µg/kg dry	117		84.7	30-150			

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## QUALITY CONTROL

## Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232317 - SW-846 3540C										
Blank (B232317-BLK1) Prepared: 06/03/19 Analyzed: 06/05/19										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.205		mg/Kg wet	0.200		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.186		mg/Kg wet	0.200		93.2	30-150			
Surrogate: Tetrachloro-m-xylene	0.182		mg/Kg wet	0.200		90.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.161		mg/Kg wet	0.200		80.3	30-150			
LCS (B232317-BS1) Prepared: 06/03/19 Analyzed: 06/05/19										
Aroclor-1016	0.17	0.020	mg/Kg wet	0.200		84.5	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		84.3	40-140			
Aroclor-1260	0.16	0.020	mg/Kg wet	0.200		79.9	40-140			
Aroclor-1260 [2C]	0.15	0.020	mg/Kg wet	0.200		76.9	40-140			
Surrogate: Decachlorobiphenyl	0.195		mg/Kg wet	0.200		97.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.180		mg/Kg wet	0.200		90.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.176		mg/Kg wet	0.200		88.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.156		mg/Kg wet	0.200		78.2	30-150			
LCS Dup (B232317-BSD1) Prepared: 06/03/19 Analyzed: 06/05/19										
Aroclor-1016	0.17	0.020	mg/Kg wet	0.200		82.8	40-140	2.05	30	
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		83.9	40-140	0.446	30	
Aroclor-1260	0.16	0.020	mg/Kg wet	0.200		78.9	40-140	1.22	30	
Aroclor-1260 [2C]	0.15	0.020	mg/Kg wet	0.200		76.9	40-140	0.0416	30	
Surrogate: Decachlorobiphenyl	0.195		mg/Kg wet	0.200		97.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.182		mg/Kg wet	0.200		91.0	30-150			
Surrogate: Tetrachloro-m-xylene	0.173		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.154		mg/Kg wet	0.200		77.2	30-150			

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232351 - SW-846 3546										
Blank (B232351-BLK1)										
Prepared: 06/03/19 Analyzed: 06/05/19										
C9-C18 Aliphatics	ND	10	mg/Kg wet							
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
Acenaphthene	ND	0.10	mg/Kg wet							
Acenaphthylene	ND	0.10	mg/Kg wet							
Anthracene	ND	0.10	mg/Kg wet							
Benzo(a)anthracene	ND	0.10	mg/Kg wet							
Benzo(a)pyrene	ND	0.10	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet							
Chrysene	ND	0.10	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet							
Fluoranthene	ND	0.10	mg/Kg wet							
Fluorene	ND	0.10	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet							
2-Methylnaphthalene	ND	0.10	mg/Kg wet							
Naphthalene	ND	0.10	mg/Kg wet							
Phenanthrene	ND	0.10	mg/Kg wet							
Pyrene	ND	0.10	mg/Kg wet							
n-Decane	ND	0.10	mg/Kg wet							
n-Docosane	ND	0.10	mg/Kg wet							
n-Dodecane	ND	0.10	mg/Kg wet							
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	3.50		mg/Kg wet	5.00		70.0	40-140			
Surrogate: o-Terphenyl (OTP)	3.83		mg/Kg wet	5.00		76.6	40-140			
Surrogate: 2-Bromonaphthalene	4.68		mg/Kg wet	5.00		93.7	40-140			
Surrogate: 2-Fluorobiphenyl	5.12		mg/Kg wet	5.00		102	40-140			
LCS (B232351-BS1)										
Prepared: 06/03/19 Analyzed: 06/05/19										
C9-C18 Aliphatics	24.8	10	mg/Kg wet	30.0		82.8	40-140			
C19-C36 Aliphatics	32.6	10	mg/Kg wet	40.0		81.4	40-140			
Unadjusted C11-C22 Aromatics	68.4	10	mg/Kg wet	85.0		80.4	40-140			
Acenaphthene	3.55	0.10	mg/Kg wet	5.00		71.0	40-140			
Acenaphthylene	3.21	0.10	mg/Kg wet	5.00		64.2	40-140			
Anthracene	4.07	0.10	mg/Kg wet	5.00		81.4	40-140			
Benzo(a)anthracene	4.33	0.10	mg/Kg wet	5.00		86.7	40-140			
Benzo(a)pyrene	4.28	0.10	mg/Kg wet	5.00		85.7	40-140			
Benzo(b)fluoranthene	4.37	0.10	mg/Kg wet	5.00		87.3	40-140			



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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232351 - SW-846 3546										
LCS (B232351-BS1)										
Prepared: 06/03/19 Analyzed: 06/05/19										
Benzo(g,h,i)perylene	3.85	0.10	mg/Kg wet	5.00		77.1	40-140			
Benzo(k)fluoranthene	4.36	0.10	mg/Kg wet	5.00		87.2	40-140			
Chrysene	4.44	0.10	mg/Kg wet	5.00		88.7	40-140			
Dibenz(a,h)anthracene	4.26	0.10	mg/Kg wet	5.00		85.1	40-140			
Fluoranthene	4.27	0.10	mg/Kg wet	5.00		85.4	40-140			
Fluorene	3.62	0.10	mg/Kg wet	5.00		72.4	40-140			
Indeno(1,2,3-cd)pyrene	3.97	0.10	mg/Kg wet	5.00		79.4	40-140			
2-Methylnaphthalene	2.87	0.10	mg/Kg wet	5.00		57.5	40-140			
Naphthalene	2.96	0.10	mg/Kg wet	5.00		59.3	40-140			
Phenanthrene	4.00	0.10	mg/Kg wet	5.00		80.0	40-140			
Pyrene	4.32	0.10	mg/Kg wet	5.00		86.4	40-140			
n-Decane	2.33	0.10	mg/Kg wet	5.00		46.5	40-140			
n-Docosane	4.42	0.10	mg/Kg wet	5.00		88.3	40-140			
n-Dodecane	2.93	0.10	mg/Kg wet	5.00		58.6	40-140			
n-Eicosane	4.17	0.10	mg/Kg wet	5.00		83.4	40-140			
n-Hexacosane	4.39	0.10	mg/Kg wet	5.00		87.8	40-140			
n-Hexadecane	4.12	0.10	mg/Kg wet	5.00		82.3	40-140			
n-Hexatriacontane	4.18	0.10	mg/Kg wet	5.00		83.6	40-140			
n-Nonadecane	4.20	0.10	mg/Kg wet	5.00		84.0	40-140			
Nonane	1.57	0.10	mg/Kg wet	5.00		31.4	30-140			
n-Octacosane	4.25	0.10	mg/Kg wet	5.00		85.1	40-140			
n-Octadecane	4.26	0.10	mg/Kg wet	5.00		85.1	40-140			
n-Tetracosane	4.41	0.10	mg/Kg wet	5.00		88.2	40-140			
n-Tetradecane	3.52	0.10	mg/Kg wet	5.00		70.4	40-140			
n-Triacontane	4.20	0.10	mg/Kg wet	5.00		84.0	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	3.73		mg/Kg wet	5.00		74.6	40-140			
Surrogate: o-Terphenyl (OTP)	4.01		mg/Kg wet	5.00		80.3	40-140			
Surrogate: 2-Bromonaphthalene	4.29		mg/Kg wet	5.00		85.7	40-140			
Surrogate: 2-Fluorobiphenyl	4.74		mg/Kg wet	5.00		94.7	40-140			
LCS Dup (B232351-BS1)										
Prepared: 06/03/19 Analyzed: 06/05/19										
C9-C18 Aliphatics	23.7	10	mg/Kg wet	30.0		79.1	40-140	4.51	25	
C19-C36 Aliphatics	31.2	10	mg/Kg wet	40.0		78.0	40-140	4.29	25	
Unadjusted C11-C22 Aromatics	68.3	10	mg/Kg wet	85.0		80.3	40-140	0.0906	25	
Acenaphthene	3.62	0.10	mg/Kg wet	5.00		72.4	40-140	1.94	25	
Acenaphthylene	3.27	0.10	mg/Kg wet	5.00		65.4	40-140	1.88	25	
Anthracene	4.14	0.10	mg/Kg wet	5.00		82.8	40-140	1.76	25	
Benzo(a)anthracene	4.32	0.10	mg/Kg wet	5.00		86.4	40-140	0.236	25	
Benzo(a)pyrene	4.20	0.10	mg/Kg wet	5.00		83.9	40-140	2.07	25	
Benzo(b)fluoranthene	4.30	0.10	mg/Kg wet	5.00		86.1	40-140	1.40	25	
Benzo(g,h,i)perylene	3.78	0.10	mg/Kg wet	5.00		75.5	40-140	2.06	25	
Benzo(k)fluoranthene	4.29	0.10	mg/Kg wet	5.00		85.7	40-140	1.76	25	
Chrysene	4.43	0.10	mg/Kg wet	5.00		88.6	40-140	0.0835	25	
Dibenz(a,h)anthracene	4.18	0.10	mg/Kg wet	5.00		83.6	40-140	1.83	25	
Fluoranthene	4.33	0.10	mg/Kg wet	5.00		86.6	40-140	1.44	25	
Fluorene	3.73	0.10	mg/Kg wet	5.00		74.6	40-140	3.01	25	
Indeno(1,2,3-cd)pyrene	3.87	0.10	mg/Kg wet	5.00		77.4	40-140	2.48	25	
2-Methylnaphthalene	2.90	0.10	mg/Kg wet	5.00		58.0	40-140	0.956	25	
Naphthalene	2.92	0.10	mg/Kg wet	5.00		58.4	40-140	1.44	25	
Phenanthrene	4.11	0.10	mg/Kg wet	5.00		82.1	40-140	2.61	25	

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232351 - SW-846 3546										
LCS Dup (B232351-BSD1)										
Prepared: 06/03/19 Analyzed: 06/05/19										
Pyrene	4.40	0.10	mg/Kg wet	5.00		87.9	40-140	1.67	25	
n-Decane	2.15	0.10	mg/Kg wet	5.00		43.1	40-140	7.71	25	
n-Docosane	4.23	0.10	mg/Kg wet	5.00		84.5	40-140	4.40	25	
n-Dodecane	2.80	0.10	mg/Kg wet	5.00		56.0	40-140	4.37	25	
n-Eicosane	3.99	0.10	mg/Kg wet	5.00		79.8	40-140	4.49	25	
n-Hexacosane	4.20	0.10	mg/Kg wet	5.00		84.1	40-140	4.36	25	
n-Hexadecane	3.97	0.10	mg/Kg wet	5.00		79.3	40-140	3.69	25	
n-Hexatriacontane	4.04	0.10	mg/Kg wet	5.00		80.8	40-140	3.36	25	
n-Nonadecane	4.01	0.10	mg/Kg wet	5.00		80.3	40-140	4.58	25	
n-Nonane	1.39	0.10	mg/Kg wet	5.00		27.8	30-140	12.2	25	L-07
n-Octacosane	4.09	0.10	mg/Kg wet	5.00		81.8	40-140	3.93	25	
n-Octadecane	4.07	0.10	mg/Kg wet	5.00		81.3	40-140	4.56	25	
n-Tetracosane	4.21	0.10	mg/Kg wet	5.00		84.3	40-140	4.48	25	
n-Tetradecane	3.36	0.10	mg/Kg wet	5.00		67.2	40-140	4.59	25	
n-Triacontane	4.05	0.10	mg/Kg wet	5.00		81.0	40-140	3.64	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	3.78		mg/Kg wet	5.00		75.6	40-140			
Surrogate: o-Terphenyl (OTP)	4.14		mg/Kg wet	5.00		82.7	40-140			
Surrogate: 2-Bromonaphthalene	4.75		mg/Kg wet	5.00		94.9	40-140			
Surrogate: 2-Fluorobiphenyl	5.21		mg/Kg wet	5.00		104	40-140			
Matrix Spike (B232351-MS1)										
Source: 19E1819-01 Prepared: 06/03/19 Analyzed: 06/05/19										
C9-C18 Aliphatics	23.5	10	mg/Kg dry	31.1	2.64	67.1	40-140			
C19-C36 Aliphatics	31.6	10	mg/Kg dry	41.5	2.95	69.1	40-140			
Unadjusted C11-C22 Aromatics	61.2	10	mg/Kg dry	88.2	3.66	65.3	40-140			
Acenaphthene	3.14	0.10	mg/Kg dry	5.19	ND	60.6	40-140			
Acenaphthylene	2.81	0.10	mg/Kg dry	5.19	ND	54.3	40-140			
Anthracene	3.67	0.10	mg/Kg dry	5.19	ND	70.8	40-140			
Benzo(a)anthracene	3.92	0.10	mg/Kg dry	5.19	ND	75.5	40-140			
Benzo(a)pyrene	3.81	0.10	mg/Kg dry	5.19	ND	73.5	40-140			
Benzo(b)fluoranthene	3.89	0.10	mg/Kg dry	5.19	ND	75.1	40-140			
Benzo(g,h,i)perylene	3.45	0.10	mg/Kg dry	5.19	ND	66.5	40-140			
Benzo(k)fluoranthene	3.89	0.10	mg/Kg dry	5.19	ND	75.1	40-140			
Chrysene	4.05	0.10	mg/Kg dry	5.19	ND	78.0	40-140			
Dibenz(a,h)anthracene	3.83	0.10	mg/Kg dry	5.19	ND	73.9	40-140			
Fluoranthene	3.89	0.10	mg/Kg dry	5.19	ND	75.0	40-140			
Fluorene	3.25	0.10	mg/Kg dry	5.19	ND	62.6	40-140			
Indeno(1,2,3-cd)pyrene	3.50	0.10	mg/Kg dry	5.19	ND	67.5	40-140			
2-Methylnaphthalene	2.49	0.10	mg/Kg dry	5.19	ND	48.0	40-140			
Naphthalene	2.53	0.10	mg/Kg dry	5.19	ND	48.8	40-140			
Phenanthrene	3.64	0.10	mg/Kg dry	5.19	ND	70.2	40-140			
Pyrene	3.96	0.10	mg/Kg dry	5.19	ND	76.4	40-140			
n-Nonane	1.45	0.10	mg/Kg dry	5.19	ND	28.0	30-140			L-07
Surrogate: Chlorooctadecane (COD)	3.72		mg/Kg dry	5.19		71.7	40-140			
Surrogate: o-Terphenyl (OTP)	3.68		mg/Kg dry	5.19		71.0	40-140			
Surrogate: 2-Bromonaphthalene	4.43		mg/Kg dry	5.19		85.3	40-140			
Surrogate: 2-Fluorobiphenyl	5.03		mg/Kg dry	5.19		96.9	40-140			

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232351 - SW-846 3546										
Matrix Spike Dup (B232351-MSD1)		Source: 19E1819-01			Prepared: 06/03/19 Analyzed: 06/05/19					
C9-C18 Aliphatics	26.9	10	mg/Kg dry	31.1	2.64	77.9	40-140	13.3	50	
C19-C36 Aliphatics	33.7	10	mg/Kg dry	41.5	2.95	74.1	40-140	6.37	50	
Unadjusted C11-C22 Aromatics	72.3	10	mg/Kg dry	88.2	3.66	77.9	40-140	16.7	50	
Acenaphthene	4.21	0.10	mg/Kg dry	5.19	ND	81.1	40-140	29.0	50	
Acenaphthylene	3.87	0.10	mg/Kg dry	5.19	ND	74.6	40-140	31.5	50	
Anthracene	4.21	0.10	mg/Kg dry	5.19	ND	81.2	40-140	13.7	50	
Benzo(a)anthracene	4.30	0.10	mg/Kg dry	5.19	ND	83.0	40-140	9.35	50	
Benzo(a)pyrene	4.21	0.10	mg/Kg dry	5.19	ND	81.2	40-140	10.0	50	
Benzo(b)fluoranthene	4.30	0.10	mg/Kg dry	5.19	ND	82.8	40-140	9.87	50	
Benzo(g,h,i)perylene	3.73	0.10	mg/Kg dry	5.19	ND	72.0	40-140	7.89	50	
Benzo(k)fluoranthene	4.30	0.10	mg/Kg dry	5.19	ND	82.8	40-140	9.79	50	
Chrysene	4.42	0.10	mg/Kg dry	5.19	ND	85.2	40-140	8.77	50	
Dibenz(a,h)anthracene	4.18	0.10	mg/Kg dry	5.19	ND	80.7	40-140	8.69	50	
Fluoranthene	4.34	0.10	mg/Kg dry	5.19	ND	83.7	40-140	11.0	50	
Fluorene	4.07	0.10	mg/Kg dry	5.19	ND	78.6	40-140	22.6	50	
Indeno(1,2,3-cd)pyrene	3.88	0.10	mg/Kg dry	5.19	ND	74.9	40-140	10.3	50	
2-Methylnaphthalene	3.59	0.10	mg/Kg dry	5.19	ND	69.2	40-140	36.3	50	
Naphthalene	3.69	0.10	mg/Kg dry	5.19	ND	71.2	40-140	37.3	50	
Phenanthrene	4.21	0.10	mg/Kg dry	5.19	ND	81.2	40-140	14.5	50	
Pyrene	4.42	0.10	mg/Kg dry	5.19	ND	85.3	40-140	11.1	50	
Nonane	1.93	0.10	mg/Kg dry	5.19	ND	37.3	30-140	28.2	50	
Surrogate: Chlorooctadecane (COD)	4.06		mg/Kg dry	5.19		78.4	40-140			
Surrogate: o-Terphenyl (OTP)	4.18		mg/Kg dry	5.19		80.6	40-140			
Surrogate: 2-Bromonaphthalene	5.29		mg/Kg dry	5.19		102	40-140			
Surrogate: 2-Fluorobiphenyl	5.96		mg/Kg dry	5.19		115	40-140			

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B232287 - MA VPH</b>										
<b>Blank (B232287-BLK1)</b>										
					Prepared & Analyzed: 06/03/19					
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg wet							
C5-C8 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C10 Aromatics	ND	10	mg/Kg wet							
Benzene	ND	0.050	mg/Kg wet							
Butylcyclohexane	ND	0.050	mg/Kg wet							
Decane	ND	0.050	mg/Kg wet							
Ethylbenzene	ND	0.050	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/Kg wet							
2-Methylpentane	ND	0.050	mg/Kg wet							
Naphthalene	ND	0.25	mg/Kg wet							
Nonane	ND	0.050	mg/Kg wet							
Pentane	ND	0.050	mg/Kg wet							
Toluene	ND	0.050	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg wet							
2,2,4-Trimethylpentane	ND	0.050	mg/Kg wet							
m+p Xylene	ND	0.10	mg/Kg wet							
Xylene	ND	0.050	mg/Kg wet							
Surrogate: 2,5-Dibromotoluene (FID)	38.4		µg/L	40.0		96.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	37.1		µg/L	40.0		92.8	70-130			
<b>LCS (B232287-BS1)</b>										
					Prepared & Analyzed: 06/03/19					
Benzene	0.0506	0.0010	mg/Kg wet	0.0500		101	70-130			
Butylcyclohexane	0.0596	0.0010	mg/Kg wet	0.0500		119	70-130			
Decane	0.0492	0.0010	mg/Kg wet	0.0500		98.5	70-130			
Ethylbenzene	0.0494	0.0010	mg/Kg wet	0.0500		98.9	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0479	0.0010	mg/Kg wet	0.0500		95.7	70-130			
2-Methylpentane	0.0612	0.0010	mg/Kg wet	0.0500		122	70-130			
Naphthalene	0.0485	0.0050	mg/Kg wet	0.0500		97.1	70-130			
Nonane	0.0589	0.0010	mg/Kg wet	0.0500		118	30-130			
Pentane	0.0606	0.0010	mg/Kg wet	0.0500		121	70-130			
Toluene	0.0500	0.0010	mg/Kg wet	0.0500		99.9	70-130			
1,2,4-Trimethylbenzene	0.0493	0.0010	mg/Kg wet	0.0500		98.7	70-130			
2,2,4-Trimethylpentane	0.0542	0.0010	mg/Kg wet	0.0500		108	70-130			
m+p Xylene	0.100	0.0020	mg/Kg wet	0.100		100	70-130			
o-Xylene	0.0499	0.0010	mg/Kg wet	0.0500		99.8	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	41.2		µg/L	40.0		103	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	39.1		µg/L	40.0		97.6	70-130			
<b>LCS Dup (B232287-BSD1)</b>										
					Prepared & Analyzed: 06/03/19					
Benzene	0.0491	0.0010	mg/Kg wet	0.0500		98.1	70-130	3.04	25	
Butylcyclohexane	0.0579	0.0010	mg/Kg wet	0.0500		116	70-130	2.83	25	
Decane	0.0469	0.0010	mg/Kg wet	0.0500		93.9	70-130	4.75	25	
Ethylbenzene	0.0485	0.0010	mg/Kg wet	0.0500		97.1	70-130	1.84	25	
Methyl tert-Butyl Ether (MTBE)	0.0475	0.0010	mg/Kg wet	0.0500		94.9	70-130	0.814	25	
2-Methylpentane	0.0586	0.0010	mg/Kg wet	0.0500		117	70-130	4.37	25	
Naphthalene	0.0490	0.0050	mg/Kg wet	0.0500		98.0	70-130	0.966	25	
Nonane	0.0569	0.0010	mg/Kg wet	0.0500		114	30-130	3.54	25	
Pentane	0.0601	0.0010	mg/Kg wet	0.0500		120	70-130	0.831	25	
Toluene	0.0488	0.0010	mg/Kg wet	0.0500		97.6	70-130	2.34	25	
1,2,4-Trimethylbenzene	0.0486	0.0010	mg/Kg wet	0.0500		97.1	70-130	1.58	25	

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B232287 - MA VPH</b>										
<b>LCS Dup (B232287-BSD1)</b>				Prepared & Analyzed: 06/03/19						
2,2,4-Trimethylpentane	0.0516	0.0010	mg/Kg wet	0.0500		103	70-130	4.81	25	
m+p Xylene	0.0981	0.0020	mg/Kg wet	0.100		98.1	70-130	2.02	25	
o-Xylene	0.0490	0.0010	mg/Kg wet	0.0500		97.9	70-130	1.91	25	
Surrogate: 2,5-Dibromotoluene (FID)	41.5		µg/L	40.0		104	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	40.8		µg/L	40.0		102	70-130			
<b>Batch B232289 - MA VPH</b>										
<b>Blank (B232289-BLK1)</b>				Prepared & Analyzed: 06/03/19						
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg wet							
C5-C8 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C10 Aromatics	ND	10	mg/Kg wet							
Benzene	ND	0.050	mg/Kg wet							
Butylcyclohexane	ND	0.050	mg/Kg wet							
Decane	ND	0.050	mg/Kg wet							
Ethylbenzene	ND	0.050	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/Kg wet							
Methylpentane	ND	0.050	mg/Kg wet							
Naphthalene	ND	0.25	mg/Kg wet							
Nonane	ND	0.050	mg/Kg wet							
Pentane	ND	0.050	mg/Kg wet							
Toluene	ND	0.050	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg wet							
2,2,4-Trimethylpentane	ND	0.050	mg/Kg wet							
m+p Xylene	ND	0.10	mg/Kg wet							
o-Xylene	ND	0.050	mg/Kg wet							
Surrogate: 2,5-Dibromotoluene (FID)	41.9		µg/L	40.0		105	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	39.3		µg/L	40.0		98.3	70-130			
<b>LCS (B232289-BS1)</b>				Prepared & Analyzed: 06/03/19						
Benzene	0.0466	0.0010	mg/Kg wet	0.0500		93.2	70-130			
Butylcyclohexane	0.0575	0.0010	mg/Kg wet	0.0500		115	70-130			
Decane	0.0464	0.0010	mg/Kg wet	0.0500		92.9	70-130			
Ethylbenzene	0.0461	0.0010	mg/Kg wet	0.0500		92.2	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0438	0.0010	mg/Kg wet	0.0500		87.6	70-130			
2-Methylpentane	0.0551	0.0010	mg/Kg wet	0.0500		110	70-130			
Naphthalene	0.0447	0.0050	mg/Kg wet	0.0500		89.3	70-130			
Nonane	0.0559	0.0010	mg/Kg wet	0.0500		112	30-130			
Pentane	0.0543	0.0010	mg/Kg wet	0.0500		109	70-130			
Toluene	0.0463	0.0010	mg/Kg wet	0.0500		92.6	70-130			
1,2,4-Trimethylbenzene	0.0460	0.0010	mg/Kg wet	0.0500		91.9	70-130			
2,2,4-Trimethylpentane	0.0499	0.0010	mg/Kg wet	0.0500		99.9	70-130			
m+p Xylene	0.0931	0.0020	mg/Kg wet	0.100		93.1	70-130			
o-Xylene	0.0463	0.0010	mg/Kg wet	0.0500		92.6	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	43.4		µg/L	40.0		108	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	41.1		µg/L	40.0		103	70-130			

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232289 - MA VPH										
LCS Dup (B232289-BSD1)					Prepared & Analyzed: 06/03/19					
Benzene	0.0476	0.0010	mg/Kg wet	0.0500		95.1	70-130	1.99	25	
Butylcyclohexane	0.0570	0.0010	mg/Kg wet	0.0500		114	70-130	0.936	25	
Decane	0.0459	0.0010	mg/Kg wet	0.0500		91.8	70-130	1.16	25	
Ethylbenzene	0.0472	0.0010	mg/Kg wet	0.0500		94.3	70-130	2.31	25	
Methyl tert-Butyl Ether (MTBE)	0.0442	0.0010	mg/Kg wet	0.0500		88.5	70-130	0.979	25	
2-Methylpentane	0.0561	0.0010	mg/Kg wet	0.0500		112	70-130	1.85	25	
Naphthalene	0.0455	0.0050	mg/Kg wet	0.0500		90.9	70-130	1.76	25	
Nonane	0.0563	0.0010	mg/Kg wet	0.0500		113	30-130	0.677	25	
Pentane	0.0536	0.0010	mg/Kg wet	0.0500		107	70-130	1.34	25	
Toluene	0.0474	0.0010	mg/Kg wet	0.0500		94.7	70-130	2.27	25	
1,2,4-Trimethylbenzene	0.0468	0.0010	mg/Kg wet	0.0500		93.7	70-130	1.94	25	
2,2,4-Trimethylpentane	0.0502	0.0010	mg/Kg wet	0.0500		100	70-130	0.543	25	
m+p Xylene	0.0953	0.0020	mg/Kg wet	0.100		95.3	70-130	2.29	25	
o-Xylene	0.0473	0.0010	mg/Kg wet	0.0500		94.6	70-130	2.16	25	
Surrogate: 2,5-Dibromotoluene (FID)	47.7		µg/L	40.0		119	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	47.3		µg/L	40.0		118	70-130			

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## QUALITY CONTROL

## Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232592 - SW-846 3050B										
Blank (B232592-BLK1)										
Prepared: 06/05/19 Analyzed: 06/06/19										
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
LCS (B232592-BS1)										
Prepared: 06/05/19 Analyzed: 06/06/19										
Antimony	58.8	4.9	mg/Kg wet	133		44.2	3-196.8			
Arsenic	68.0	4.9	mg/Kg wet	77.2		88.1	82.4-117.4			
Barium	372	4.9	mg/Kg wet	391		95.2	82-118			
Beryllium	207	0.49	mg/Kg wet	238		87.0	83-116.6			
Cadmium	158	0.49	mg/Kg wet	182		87.1	83.1-117.5			
Chromium	245	0.99	mg/Kg wet	272		90.0	81.5-118.5			
Lead	259	1.5	mg/Kg wet	241		108	81.8-118.2			
Nickel	114	0.99	mg/Kg wet	125		91.6	82.4-117.5			
Selenium	192	9.9	mg/Kg wet	216		89.1	79-121.5			
Silver	66.3	0.99	mg/Kg wet	66.3		100	79.6-120.4			
Thallium	140	4.9	mg/Kg wet	148		94.3	80.7-119.3			
Vanadium	87.4	2.0	mg/Kg wet	97.6		89.5	78-121.5			
Zinc	121	2.0	mg/Kg wet	127		95.2	80.8-118.9			
LCS Dup (B232592-BS1)										
Prepared: 06/05/19 Analyzed: 06/06/19										
Antimony	55.9	4.8	mg/Kg wet	133		42.0	3-196.8	5.12	30	
Arsenic	68.4	4.8	mg/Kg wet	77.2		88.6	82.4-117.4	0.524	30	
Barium	366	4.8	mg/Kg wet	391		93.7	82-118	1.67	20	
Beryllium	206	0.48	mg/Kg wet	238		86.4	83-116.6	0.766	30	
Cadmium	153	0.48	mg/Kg wet	182		84.3	83.1-117.5	3.27	20	
Chromium	243	0.96	mg/Kg wet	272		89.4	81.5-118.5	0.616	30	
Lead	221	1.4	mg/Kg wet	241		91.8	81.8-118.2	15.9	30	
Nickel	113	0.96	mg/Kg wet	125		90.1	82.4-117.5	1.66	30	
Selenium	192	9.6	mg/Kg wet	216		89.0	79-121.5	0.0101	30	
Silver	67.1	0.96	mg/Kg wet	66.3		101	79.6-120.4	1.24	30	
Thallium	139	4.8	mg/Kg wet	148		94.0	80.7-119.3	0.287	30	
Vanadium	86.4	1.9	mg/Kg wet	97.6		88.5	78-121.5	1.13	30	
Zinc	122	1.9	mg/Kg wet	127		96.3	80.8-118.9	1.22	30	

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## QUALITY CONTROL

## Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232592 - SW-846 3050B										
Duplicate (B232592-DUP1) Source: 19E1819-02 Prepared: 06/05/19 Analyzed: 06/06/19										
Antimony	ND	1.8	mg/Kg dry		ND			NC	35	
Arsenic	ND	1.8	mg/Kg dry		4.17			NC	35	R-04
Barium	17.7	1.8	mg/Kg dry		18.3			2.97	35	
Beryllium	0.191	0.18	mg/Kg dry		0.193			0.896	35	
Cadmium	ND	0.18	mg/Kg dry		0.269			NC	35	R-04
Chromium	6.82	0.35	mg/Kg dry		6.60			3.19	35	
Lead	9.49	0.53	mg/Kg dry		9.20			3.16	35	
Nickel	5.62	0.35	mg/Kg dry		5.60			0.335	35	
Selenium	ND	3.5	mg/Kg dry		ND			NC	35	
Silver	ND	0.35	mg/Kg dry		ND			NC	35	
Thallium	ND	1.8	mg/Kg dry		ND			NC	35	
Vanadium	14.2	0.70	mg/Kg dry		13.9			2.10	35	
Zinc	20.7	0.70	mg/Kg dry		20.7			0.299	35	
MRL Check (B232592-MRL1) Prepared: 06/05/19 Analyzed: 06/06/19										
Lead	0.449	0.50	mg/Kg wet	0.497		90.4	80-120			
Matrix Spike (B232592-MS1) Source: 19E1819-02 Prepared: 06/05/19 Analyzed: 06/06/19										
Antimony	9.37	1.8	mg/Kg dry	17.8	1.41	44.7	* 75-125			MS-07
Arsenic	17.6	1.8	mg/Kg dry	17.8	4.17	75.3	75-125			
Barium	34.8	1.8	mg/Kg dry	17.8	18.3	92.7	75-125			
Beryllium	17.0	0.18	mg/Kg dry	17.8	0.193	94.6	75-125			
Cadmium	17.0	0.18	mg/Kg dry	17.8	0.269	94.1	75-125			
Chromium	23.3	0.36	mg/Kg dry	17.8	6.60	93.8	75-125			
Lead	25.4	0.53	mg/Kg dry	17.8	9.20	91.0	75-125			
Nickel	22.6	0.36	mg/Kg dry	17.8	5.60	95.3	75-125			
Selenium	14.9	3.6	mg/Kg dry	17.8	ND	83.9	75-125			
Silver	18.2	0.36	mg/Kg dry	17.8	ND	102	75-125			
Thallium	20.7	1.8	mg/Kg dry	17.8	ND	116	75-125			
Vanadium	30.6	0.71	mg/Kg dry	17.8	13.9	93.6	75-125			
Zinc	52.4	0.71	mg/Kg dry	35.6	20.7	89.1	75-125			
Batch B232653 - SW-846 7471										
Blank (B232653-BLK1) Prepared: 06/06/19 Analyzed: 06/07/19										
Mercury	ND	0.025	mg/Kg wet							
LCS (B232653-BS1) Prepared: 06/06/19 Analyzed: 06/07/19										
Mercury	22.4	1.9	mg/Kg wet	27.3		82.0	64-136.5			
LCS Dup (B232653-BSD1) Prepared: 06/06/19 Analyzed: 06/07/19										
Mercury	21.2	1.9	mg/Kg wet	27.3		77.6	64-136.5	5.58	20	



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## QUALITY CONTROL

## Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
Batch B232653 - SW-846 7471								
Duplicate (B232653-DUP1)		Source: 19E1819-02		Prepared: 06/06/19 Analyzed: 06/07/19				
Mercury	ND	0.026	mg/Kg dry		ND		NC 35	
Matrix Spike (B232653-MS1)		Source: 19E1819-02		Prepared: 06/06/19 Analyzed: 06/07/19				
Mercury	0.367	0.027	mg/Kg dry	0.361	ND 102	75-125		

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## BREAKDOWN REPORT

Lab Sample ID: S036798-PEM1 Analyzed: 06/04/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.77
Endrin [1]	2.49

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	0.81
Endrin [2]	2.48

## BREAKDOWN REPORT

Lab Sample ID: S036798-PEM2 Analyzed: 06/04/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.07
Endrin [1]	2.35

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.07
Endrin [2]	2.39

## BREAKDOWN REPORT

Lab Sample ID: S036798-PEM3 Analyzed: 06/05/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.83
Endrin [1]	2.04

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## BREAKDOWN REPORT

Lab Sample ID: S036798-PEM3 Analyzed: 06/05/2019

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.84
Endrin [2]	2.10

## BREAKDOWN REPORT

Lab Sample ID: S036798-PEM4 Analyzed: 06/05/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	2.16
Endrin [1]	2.03

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	2.17
Endrin [2]	2.06

## BREAKDOWN REPORT

Lab Sample ID: S036798-PEM5 Analyzed: 06/06/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	2.48
Endrin [1]	2.26

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	2.50
Endrin [2]	2.38

## BREAKDOWN REPORT

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## BREAKDOWN REPORT

Lab Sample ID: S036816-PEM1 Analyzed: 06/06/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	3.59
Endrin [1]	2.39

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	4.29
Endrin [2]	2.92

## BREAKDOWN REPORT

Lab Sample ID: S036816-PEM2 Analyzed: 06/06/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	3.13
Endrin [1]	2.26

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	3.69
Endrin [2]	2.85

## BREAKDOWN REPORT

Lab Sample ID: S036816-PEM3 Analyzed: 06/07/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	2.90
Endrin [1]	2.14

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## BREAKDOWN REPORT

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**Lab Sample ID:** S036816-PEM3 **Analyzed:** 06/07/2019

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**Column Number:** 2

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Analyte	% Breakdown
4,4'-DDT [2]	3.41
Endrin [2]	2.66

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES *SW-846 8081B*

GP1-2(0-2)

Lab Sample ID: 19E1819-13 Date(s) Analyzed: 06/06/2019 06/06/2019  
Instrument ID (1): ECD2 Instrument ID (2): ECD2  
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDE	1	7.256	0.000	0.000	0.57	
	2	7.313	0.000	0.000	0.49	15.1
4,4'-DDT	1	7.937	0.000	0.000	0.48	
	2	8.007	0.000	0.000	0.45	6.5

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

GP1-6.(3-5)

Lab Sample ID: 19E1819-14

Date(s) Analyzed: 06/06/2019 06/06/2019

Instrument ID (1): ECD2

Instrument ID (2): ECD2

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDE	1	7.255	0.000	0.000	0.027	
	2	7.313	0.000	0.000	0.026	3.8
4,4'-DDT	1	7.936	0.000	0.000	0.020	
	2	8.006	0.000	0.000	0.020	0.0

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

GP1-7(3-5)

Lab Sample ID: 19E1819-15

Date(s) Analyzed: 06/06/2019 06/07/2019

Instrument ID (1): ECD2A

Instrument ID (2): ECD2B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.723	0.000	0.000	0.36	
	2	7.762	0.000	0.000	0.44	20.0
4,4'-DDE	1	7.260	0.000	0.000	5.2	
	2	7.311	0.000	0.000	4.7	10.1
4,4'-DDT	1	7.934	0.000	0.000	12	
	2	8.003	0.000	0.000	12	0.0
Chlordane	1	0.000	0.000	0.000	0.11	
	2	0.000	0.000	0.000	0.092	17.8
Dieldrin	1	7.499	0.000	0.000	0.092	
	2	7.444	0.000	0.000	0.079	15.2
Endrin	1	7.681	0.000	0.000	0.035	
	2	7.682	0.000	0.000	0.025	33.3
Endrin Ketone	1	8.628	0.000	0.000	0.013	
	2	8.628	0.000	0.000	0.049	116.0
Heptachlor Epoxide	1	6.998	0.000	0.000	0.097	
	2	6.937	0.000	0.000	0.0083	168.0



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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B232317-BS1

Date(s) Analyzed: 06/05/2019 06/05/2019

Instrument ID (1):

Instrument ID (2):

GC Column (1):

ID: (mm)

GC Column (2):

ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.17	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.15	6.5

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS.Dup

Lab Sample ID: B232317-BSD1

Date(s) Analyzed: 06/05/2019 06/05/2019

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.17	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.15	6.5

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B232333-BS1 Date(s) Analyzed: 06/06/2019 06/06/2019

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.382	0.000	0.000	0.089	
	2	7.393	0.000	0.000	0.091	2.2
4,4'-DDE	1	6.935	0.000	0.000	0.090	
	2	6.957	0.000	0.000	0.091	1.1
4,4'-DDT	1	7.597	0.000	0.000	0.088	
	2	7.636	0.000	0.000	0.085	3.5
Aldrin	1	6.269	0.000	0.000	0.089	
	2	6.190	0.000	0.000	0.089	0.0
alpha-BHC	1	5.539	0.000	0.000	0.087	
	2	5.468	0.000	0.000	0.093	6.7
beta-BHC	1	5.799	0.000	0.000	0.083	
	2	5.744	0.000	0.000	0.082	1.2
delta-BHC	1	5.919	0.000	0.000	0.076	
	2	5.933	0.000	0.000	0.083	8.8
Dieldrin	1	7.159	0.000	0.000	0.088	
	2	7.071	0.000	0.000	0.088	0.0
Endosulfan I	1	6.983	0.000	0.000	0.086	
	2	6.869	0.000	0.000	0.087	1.2
Endosulfan II	1	7.504	0.000	0.000	0.078	
	2	7.461	0.000	0.000	0.079	1.3
Endosulfan Sulfate	1	8.146	0.000	0.000	0.088	
	2	7.939	0.000	0.000	0.086	2.3
Endrin	1	7.334	0.000	0.000	0.089	
	2	7.299	0.000	0.000	0.087	2.3
Endrin Ketone	1	8.331	0.000	0.000	0.085	
	2	8.306	0.000	0.000	0.083	2.4
gamma-BHC (Lindane)	1	5.744	0.000	0.000	0.088	
	2	5.689	0.000	0.000	0.090	2.3
Heptachlor	1	6.062	0.000	0.000	0.066	
	2	5.974	0.000	0.000	0.088	28.6
Heptachlor Epoxide	1	6.695	0.000	0.000	0.085	

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B232333-BS1 Date(s) Analyzed: 06/06/2019 06/06/2019

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	6.588	0.000	0.000	0.085	0.0
Hexachlorobenzene	1	5.430	0.000	0.000	0.10	
	2	5.380	0.000	0.000	0.094	6.2
Methoxychlor	1	7.973	0.000	0.000	0.084	
	2	8.160	0.000	0.000	0.084	0.0

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS.Dup

Lab Sample ID: B232333-BSD1 Date(s) Analyzed: 06/06/2019 06/06/2019  
Instrument ID (1): ECD6 Instrument ID (2): ECD6  
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.382	0.000	0.000	0.091	
	2	7.393	0.000	0.000	0.094	3.2
4,4'-DDE	1	6.934	0.000	0.000	0.094	
	2	6.956	0.000	0.000	0.094	0.0
4,4'-DDT	1	7.596	0.000	0.000	0.090	
	2	7.635	0.000	0.000	0.088	2.3
Aldrin	1	6.268	0.000	0.000	0.092	
	2	6.189	0.000	0.000	0.093	1.1
alpha-BHC	1	5.539	0.000	0.000	0.089	
	2	5.468	0.000	0.000	0.096	7.6
beta-BHC	1	5.798	0.000	0.000	0.085	
	2	5.744	0.000	0.000	0.084	1.2
delta-BHC	1	5.919	0.000	0.000	0.078	
	2	5.933	0.000	0.000	0.085	8.6
Dieldrin	1	7.159	0.000	0.000	0.091	
	2	7.071	0.000	0.000	0.091	0.0
Endosulfan I	1	6.981	0.000	0.000	0.088	
	2	6.869	0.000	0.000	0.090	2.3
Endosulfan II	1	7.503	0.000	0.000	0.080	
	2	7.461	0.000	0.000	0.081	0.0
Endosulfan Sulfate	1	8.145	0.000	0.000	0.090	
	2	7.939	0.000	0.000	0.088	2.3
Endrin	1	7.333	0.000	0.000	0.091	
	2	7.299	0.000	0.000	0.090	1.1
Endrin Ketone	1	8.329	0.000	0.000	0.087	
	2	8.305	0.000	0.000	0.085	2.3
gamma-BHC (Lindane)	1	5.743	0.000	0.000	0.091	
	2	5.689	0.000	0.000	0.093	2.2
Heptachlor	1	6.061	0.000	0.000	0.068	
	2	5.973	0.000	0.000	0.092	30.0
Heptachlor Epoxide	1	6.694	0.000	0.000	0.088	

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**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**  
*SW-846 8081B*

LCS.Dup

Lab Sample ID: B232333-BSD1 Date(s) Analyzed: 06/06/2019 06/06/2019  
Instrument ID (1): ECD6 Instrument ID (2): ECD6  
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	6.587	0.000	0.000	0.087	1.1
Hexachlorobenzene	1	5.430	0.000	0.000	0.11	
	2	5.380	0.000	0.000	0.097	12.6
Methoxychlor	1	7.972	0.000	0.000	0.087	
	2	8.159	0.000	0.000	0.088	1.1

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS

Lab Sample ID: B232364-BS1 Date(s) Analyzed: 06/10/2019 06/10/2019

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	13.826	0.000	0.000	12.3	
	2	13.967	0.000	0.000	26.7	76.0
2,4,5-TP (Silvex)	1	13.250	0.000	0.000	12.4	
	2	13.141	0.000	0.000	12.2	1.7
2,4-D	1	11.574	0.000	0.000	117	
	2	11.543	0.000	0.000	118	1.7
2,4-DB	1	14.960	0.000	0.000	121	
	2	15.004	0.000	0.000	120	0.0
Dalapon	1	3.734	0.000	0.000	214	
	2	3.402	0.000	0.000	214	1.9
Dicamba	1	9.714	0.000	0.000	11.3	
	2	9.588	0.000	0.000	11.4	3.6
Dichloroprop	1	11.122	0.000	0.000	122	
	2	10.937	0.000	0.000	125	4.1
Dinoseb	1	16.834	0.000	0.000	19.0	
	2	15.589	0.000	0.000	21.6	12.8
MCPA	1	10.444	0.000	0.000	10800	
	2	10.336	0.000	0.000	12100	9.5
MCPP	1	10.159	0.000	0.000	11600	
	2	9.905	0.000	0.000	11200	6.9

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS\_Dup

Lab Sample ID: B232364-BSD1 Date(s) Analyzed: 06/10/2019 06/10/2019

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	13.823	0.000	0.000	11.1	
	2	13.966	0.000	0.000	24.8	77.1
2,4,5-TP (Silvex)	1	13.248	0.000	0.000	11.0	
	2	13.142	0.000	0.000	10.8	1.8
2,4-D	1	11.572	0.000	0.000	105	
	2	11.543	0.000	0.000	109	0.9
2,4-DB	1	14.959	0.000	0.000	104	
	2	15.003	0.000	0.000	109	8.6
Dalapon	1	3.732	0.000	0.000	207	
	2	3.399	0.000	0.000	208	1.0
Dicamba	1	9.713	0.000	0.000	10.4	
	2	9.587	0.000	0.000	10.8	7.7
Dichloroprop	1	11.121	0.000	0.000	110	
	2	10.936	0.000	0.000	114	3.6
Dinoseb	1	16.834	0.000	0.000	17.6	
	2	15.588	0.000	0.000	21.7	18.6
MCPA	1	10.441	0.000	0.000	9570	
	2	10.334	0.000	0.000	11000	13.6
MCPP	1	10.158	0.000	0.000	10300	
	2	9.904	0.000	0.000	10100	1.0



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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES SW-846 8151A

Matrix Spike

Lab Sample ID: B232364-MS1

Date(s) Analyzed: 06/10/2019 06/10/2019

Instrument ID (1): ECD 8

Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	13.822	0.000	0.000	11.7	
	2	13.965	0.000	0.000	33.6	94.7
2,4,5-TP (Silvex)	1	13.247	0.000	0.000	10.5	
	2	13.139	0.000	0.000	12.3	11.2
2,4-D	1	11.571	0.000	0.000	120	
	2	11.543	0.000	0.000	124	3.3
2,4-DB	1	14.957	0.000	0.000	130	
	2	15.001	0.000	0.000	142	8.8
Dalapon	1	3.730	0.000	0.000	271	
	2	3.396	0.000	0.000	270	0.0
Dicamba	1	9.713	0.000	0.000	11.7	
	2	9.588	0.000	0.000	12.2	1.7
Dichloroprop	1	11.121	0.000	0.000	129	
	2	10.936	0.000	0.000	127	2.3
Dinoseb	1	16.831	0.000	0.000	25.0	
	2	15.588	0.000	0.000	26.8	7.0
MCPA	1	10.443	0.000	0.000	11400	
	2	10.334	0.000	0.000	12100	9.5
MCPP	1	10.158	0.000	0.000	11900	
	2	9.905	0.000	0.000	11700	2.5

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

Matrix Spike Dup

Lab Sample ID: B232364-MSD1 Date(s) Analyzed: 06/10/2019 06/10/2019

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	13.822	0.000	0.000	11.8	
	2	13.965	0.000	0.000	33.0	93.3
2,4,5-TP (Silvex)	1	13.246	0.000	0.000	10.6	
	2	13.141	0.000	0.000	12.1	9.5
2,4-D	1	11.572	0.000	0.000	120	
	2	11.543	0.000	0.000	123	2.5
2,4-DB	1	14.959	0.000	0.000	130	
	2	15.004	0.000	0.000	128	1.6
Dalapon	1	3.730	0.000	0.000	250	
	2	3.396	0.000	0.000	251	0.4
Dicamba	1	9.713	0.000	0.000	12.6	
	2	9.588	0.000	0.000	12.0	8.0
Dichloroprop	1	11.121	0.000	0.000	130	
	2	10.935	0.000	0.000	125	3.9
Dinoseb	1	16.834	0.000	0.000	23.3	
	2	15.587	0.000	0.000	25.3	9.5
MCPA	1	10.442	0.000	0.000	11600	
	2	10.333	0.000	0.000	11100	7.8
MCPP	1	10.158	0.000	0.000	12100	
	2	9.904	0.000	0.000	11600	3.4

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## FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-03	Elevated reporting limit due to matrix interference.
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
L-11	Laboratory fortified blank/laboratory control sample was outside of control limits on the confirmation column, but within control limits on the primary column. All sample results are reported from the column within control criteria.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-12	Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
O-01	Soil/methanol ratio does not meet method specifications. Excess amount of soil. Sample was completely covered with methanol, but with less than the method-specified amount.
O-32	A dilution was performed as part of the standard analytical procedure.
P-02	Sample RPD between primary and confirmatory analysis exceeded 40%. Per EPA method 8000, the lower value was reported due to obvious chromatographic interference on the column with the higher result.
R-04	Duplicate relative percent difference (RPD) is a less useful indicator of sample precision for sample results that are <5 times the reporting limit (RL).
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-08	Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

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## Certified Analyses included in this Report

## CERTIFICATIONS

Analyte	Certifications
<b>MADEP-EPH-04-1.1 in Soil</b>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<b>MADEP-VPH-Feb 2018 Rev 2.1 in Soil</b>	
Unadjusted C5-C8 Aliphatics	CT,NC,ME,NH-P
C5-C8 Aliphatics	CT,NC,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C10 Aromatics	CT,NC,ME,NH-P
Benzene	CT,NC,ME,NH-P
Ethylbenzene	CT,NC,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,ME,NH-P
Naphthalene	CT,NC,ME,NH-P
Toluene	CT,NC,ME,NH-P
m+p Xylene	CT,NC,ME,NH-P
o-Xylene	CT,NC,ME,NH-P
<b>SIW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC

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## Certified Analyses included in this Report

## CERTIFICATIONS

Analyte	Certifications
<i>SIW-846 6010D in Soil</i>	
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<i>SIW-846 7471B in Soil</i>	
Mercury	CT,NH,NY,NC,ME,VA
<i>SIW-846 8081B in Soil</i>	
Aldrin	CT,NC,NH,NY,ME,VA
Aldrin [2C]	CT,NC,NH,NY,ME,VA
alpha-BHC	CT,NC,NH,NY,ME,VA
alpha-BHC [2C]	CT,NC,NH,NY,ME,VA
beta-BHC	CT,NC,NH,NY,ME,VA
beta-BHC [2C]	CT,NC,NH,NY,ME,VA
delta-BHC	CT,NC,NH,NY,ME,VA
delta-BHC [2C]	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane)	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane) [2C]	CT,NC,NH,NY,ME,VA
Chlordane	CT,NC,NH,NY,ME,VA
Chlordane [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDD	CT,NC,NH,NY,ME,VA
4,4'-DDD [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDE	CT,NC,NH,NY,ME,VA
4,4'-DDE [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDT	CT,NC,NH,NY,ME,VA
4,4'-DDT [2C]	CT,NC,NH,NY,ME,VA
Dieldrin	CT,NC,NH,NY,ME,VA
Dieldrin [2C]	CT,NC,NH,NY,ME,VA
Endosulfan I	CT,NC,NH,NY,ME,VA
Endosulfan I [2C]	CT,NC,NH,NY,ME,VA
Endosulfan II	CT,NC,NH,NY,ME,VA
Endosulfan II [2C]	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate [2C]	CT,NC,NH,NY,ME,VA
Endrin	CT,NC,NH,NY,ME,VA
Endrin [2C]	CT,NC,NH,NY,ME,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NC,NH,NY,ME,VA
Heptachlor [2C]	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide [2C]	CT,NC,NH,NY,ME,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NC,NH,NY,ME,VA
Methoxychlor [2C]	CT,NC,NH,NY,ME,VA
<i>SIW-846 8081B in Water</i>	
Aldrin	CT,NC,NH,NY,ME,VA
Aldrin [2C]	CT,NC,NH,NY,ME,VA

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## Certified Analyses included in this Report

## CERTIFICATIONS

Analyte	Certifications
<i>SW-846 8081B in Water</i>	
alpha-BHC	CT,NC,NH,NY,ME,VA
alpha-BHC [2C]	CT,NC,NH,NY,ME,VA
beta-BHC	CT,NC,NH,NY,ME,VA
beta-BHC [2C]	CT,NC,NH,NY,ME,VA
delta-BHC	CT,NC,NH,NY,ME,VA
delta-BHC [2C]	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane)	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane) [2C]	CT,NC,NH,NY,ME,VA
Chlordane	CT,NC,NH,NY,ME,VA
Chlordane [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDD	CT,NC,NH,NY,ME,VA
4,4'-DDD [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDE	CT,NC,NH,NY,ME,VA
4,4'-DDE [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDT	CT,NC,NH,NY,ME,VA
4,4'-DDT [2C]	CT,NC,NH,NY,ME,VA
Dieldrin	CT,NC,NH,NY,ME,VA
Dieldrin [2C]	CT,NC,NH,NY,ME,VA
Endosulfan I	CT,NC,NH,NY,ME,VA
Endosulfan I [2C]	CT,NC,NH,NY,ME,VA
Endosulfan II	CT,NC,NH,NY,ME,VA
Endosulfan II [2C]	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate [2C]	CT,NC,NH,NY,ME,VA
Endrin	CT,NC,NH,NY,ME,VA
Endrin [2C]	CT,NC,NH,NY,ME,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NC,NH,NY,ME,VA
Heptachlor [2C]	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide [2C]	CT,NC,NH,NY,ME,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NC,NH,NY,ME,VA
Methoxychlor [2C]	CT,NC,NH,NY,ME,VA
<i>SW-846 8082A in Soil</i>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA

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## Certified Analyses included in this Report

## CERTIFICATIONS

Analyte	Certifications
<i>SIW-846 8082A in Soil</i>	
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<i>SIW-846 8151A in Soil</i>	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
Dinoseb	NY,ME,NC,NH,VA,CT
Dinoseb [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
<i>SIW-846 8151A in Water</i>	
2,4-D	ME,NC,NH,CT,NY,VA
2,4-D [2C]	ME,NC,NH,CT,NY,VA
2,4-DB	ME,NC,NH,CT,NY,VA
2,4-DB [2C]	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex)	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex) [2C]	ME,NC,NH,CT,NY,VA
2,4,5-T	ME,NC,NH,CT,NY,VA
2,4,5-T [2C]	ME,NC,NH,CT,NY,VA
Dalapon	ME,NC,NH,CT,NY,VA
Dalapon [2C]	ME,NC,NH,CT,NY,VA
Dicamba	ME,NC,NH,CT,NY,VA
Dicamba [2C]	ME,NC,NH,CT,NY,VA
Dichloroprop	ME,NC,NH,CT,NY,VA
Dichloroprop [2C]	ME,NC,NH,CT,NY,VA
Dinoseb	ME,NC,NH,CT,NY,VA

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## Certified Analyses included in this Report

## CERTIFICATIONS

Analyte	Certifications
<i>SIV-846 8151A in Water</i>	
Dinoseb [2C]	ME,NC,NH,CT,NY,VA
MCPA	NC,CT
MCPA [2C]	NC,CT
MCPP	NC,CT
MCPP [2C]	NC,CT
<i>SIV-846 8260C in Soil</i>	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NH,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	CT,NH,NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NH,NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
4-Dioxane	NY
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	NH,NY,ME



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## Certified Analyses included in this Report

## CERTIFICATIONS

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	CT,NH,NY,ME
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NH,NY
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
Naphthalene	NH,NY,ME
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NY
1,2,4-Trichlorobenzene	NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	CT,NH,NY,ME
1,3,5-Trimethylbenzene	CT,NH,NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2019





I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**con-test®**  
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client CDW

Received By CE

Date 5-31-19

Time 1845

How were the samples received?

In Cooler T

No Cooler \_\_\_\_\_

On Ice T

No Ice \_\_\_\_\_

Direct from Sampling \_\_\_\_\_

Ambient \_\_\_\_\_

Melted Ice \_\_\_\_\_

Were samples within Temperature? 2-6°C T

By Gun # 1

Actual Temp - 2.8, 3.3

By Blank # \_\_\_\_\_

Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? NA

Were Samples Tampered with? NA

Was COC Relinquished? T

Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T

Were samples received within holding time? T

Did COC include all pertinent Information? T

Client T

Analysis T

Sampler Name T

Are Sample labels filled out and legible? T

Project T

ID's T

Collection Dates/Times T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? NA

Who was notified? \_\_\_\_\_

Who was notified? \_\_\_\_\_

Who was notified? \_\_\_\_\_

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid \_\_\_\_\_

Base \_\_\_\_\_

Vials	#	Containers	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	<u>27</u>
Meoh-	<u>24</u>	250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-	<u>24</u>	Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

#### Unused Media

Vials	#	Containers	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory

Project #: 19E1819

Project Location: Beaver St., Waltham, MA

RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

19E1819-01 thru 19E1819-15

Matrices: Soil

## CAM Protocol (check all that below)

8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A (X)	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VIA ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B (X)	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B (X)	8151 Herbicides CAM V C (X)	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

## Affirmative response to Questions A through F is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

## A response to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
---	---	--

**Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Lisa Worthington

Position: Technical Representative

Printed Name: Lisa A. WorthingtonDate: 06/10/19

## **APPENDIX C**

June 14, 2019

Alan Sundquist  
CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760

Project Location: Beaver St., Waltham, MA  
Client Job Number:  
Project Number: 1830  
Laboratory Work Order Number: 19F0402

Enclosed are results of analyses for samples received by the laboratory on June 7, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Michelle M. Koch  
Project Manager

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CDW Consultants, Inc.  
6 Huron Drive  
Natick, MA 01760  
ATTN: Alan Sundquist

REPORT DATE: 6/14/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1830

## ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19F0402

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Beaver St., Waltham, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
GP-3 MW	19F0402-01	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020B SW-846 7470A SW-846 8260C SW-846 8270D	
GP-5 MW	19F0402-02	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020B SW-846 7470A SW-846 8081B SW-846 8082A SW-846 8151A SW-846 8260C SW-846 8270D	
GP-7 MW	19F0402-03	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020B SW-846 7470A SW-846 8081B SW-846 8082A SW-846 8151A SW-846 8260C SW-846 8270D	
MW-2	19F0402-04	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020B SW-846 7470A SW-846 8260C SW-846 8270D	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8270, only a select list of PAHs was analyzed and reported in order to achieve lower detection limits than possible with EPH analysis.

For method 8151 samples were derivatized on 06/12/19.

For method 8151 sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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SW-846 8081B

**Qualifications:****P-02**

Sample RPD between primary and confirmatory analysis exceeded 40%. Per EPA method 8000, the lower value was reported due to obvious chromatographic interference on the column with the higher result.

**Analyte & Samples(s) Qualified:**

Heptachlor Epoxide  
19F0402-03[GP-7 MW]

SW-846 8260C

**Qualifications:****R-05**

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

**Analyte & Samples(s) Qualified:**

Acetone  
19F0402-01[GP-3 MW], 19F0402-02[GP-5 MW], 19F0402-03[GP-7 MW], 19F0402-04[MW-2], B232980-BLK1, B232980-BS1, B232980-BSD1

**RL-07**

Elevated reporting limit based on lowest point in calibration.

MA CAM reporting limit not met.

**Analyte & Samples(s) Qualified:**

Carbon Disulfide  
19F0402-01[GP-3 MW], 19F0402-02[GP-5 MW], 19F0402-03[GP-7 MW], 19F0402-04[MW-2]  
Methylene Chloride  
19F0402-01[GP-3 MW], 19F0402-02[GP-5 MW], 19F0402-03[GP-7 MW], 19F0402-04[MW-2]

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:**

1,2-Dichloropropane  
19F0402-01[GP-3 MW], 19F0402-02[GP-5 MW], 19F0402-03[GP-7 MW], 19F0402-04[MW-2], B232980-BLK1, B232980-BS1, B232980-BSD1, S037005-CCV1

**V-16**

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

**Analyte & Samples(s) Qualified:**

1,4-Dioxane  
19F0402-01[GP-3 MW], 19F0402-02[GP-5 MW], 19F0402-03[GP-7 MW], 19F0402-04[MW-2], B232980-BLK1, B232980-BS1, B232980-BSD1, S037005-CCV1

**V-20**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

**Analyte & Samples(s) Qualified:**

Chloromethane  
B232980-BS1, B232980-BSD1, S037005-CCV1

---

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**MADEP-VPH-Feb 2018 Rev 2.1**

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

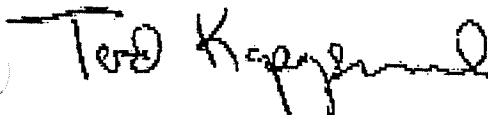
Analytical column used for VPH analysis is Restek, Rtx-502.2, 105meter, 0.53mmID, 3um df. Trap used for VPH analysis is Carbopack B/CarboSieveS-III.

SW-846 8260C

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Tod E. Kopyscinski  
Laboratory Director

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-3 MW

Sampled: 6/5/2019 09:15

Sample ID: 19F0402-01

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	6/11/19	6/12/19 9:32	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-3 MW

Sampled: 6/5/2019 09:15

Sample ID: 19F0402-01

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	6/11/19	6/12/19 9:32	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:32	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	98.6	70-130						6/12/19 9:32	
Toluene-d8	97.2	70-130						6/12/19 9:32	
4-Bromofluorobenzene	98.5	70-130						6/12/19 9:32	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-3 MW

Sampled: 6/5/2019 09:15

Sample ID: 19F0402-01

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene (SIM)	ND	1.0	µg/L	1		SW-846 8270D	6/12/19	6/13/19 10:20	CLA
Benzo(a)pyrene (SIM)	ND	0.20	µg/L	1		SW-846 8270D	6/12/19	6/13/19 10:20	CLA
Benzo(b)fluoranthene (SIM)	ND	1.0	µg/L	1		SW-846 8270D	6/12/19	6/13/19 10:20	CLA
Benzo(k)fluoranthene (SIM)	ND	1.0	µg/L	1		SW-846 8270D	6/12/19	6/13/19 10:20	CLA
Chrysene (SIM)	ND	2.0	µg/L	1		SW-846 8270D	6/12/19	6/13/19 10:20	CLA
Dibenz(a,h)anthracene (SIM)	ND	0.50	µg/L	1		SW-846 8270D	6/12/19	6/13/19 10:20	CLA
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.50	µg/L	1		SW-846 8270D	6/12/19	6/13/19 10:20	CLA
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
o-Terphenyl (OTP) (SIM)	78.9		30-130				6/13/19 10:20		



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-3 MW

Sampled: 6/5/2019 09:15

Sample ID: 19F0402-01

Sample Matrix: Ground Water

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 18:54	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	61.9	40-140						6/12/19 18:54	
o-Terphenyl (OTP)	75.7	40-140						6/12/19 18:54	
2-Bromonaphthalene	129	40-140						6/12/19 18:54	
2-Fluorobiphenyl	136	40-140						6/12/19 18:54	

Project Location: Beaver St., Waltham, MA 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Date Received: 6/7/2019

Sample Description:

Work Order: 19F0402

Field Sample #: GP-3 MW

Sampled: 6/5/2019 09:15

Sample ID: 19F0402-01

Sample Matrix: Ground Water

### Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
Benzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
Toluene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:02	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	107	70-130							
2,5-Dibromotoluene (PID)	101	70-130							

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-3 MW

Sampled: 6/5/2019 09:15

Sample ID: 19F0402-01

Sample Matrix: Ground Water

# Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 17:59	MJH
Arsenic	ND	0.80	µg/L	1		SW-846 6020B	6/11/19	6/13/19 17:59	MJH
Barium	26	10	µg/L	1		SW-846 6020B	6/11/19	6/13/19 17:59	MJH
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:33	QNW
Cadmium	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 17:59	MJH
Chromium	7.0	1.0	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:33	QNW
Lead	3.3	0.50	µg/L	1		SW-846 6020B	6/11/19	6/13/19 17:59	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/11/19	6/12/19 12:15	AJL
Nickel	ND	5.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 17:59	MJH
Selenium	ND	5.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 17:59	MJH
Silver	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 17:59	MJH
Thallium	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 17:59	MJH
Vanadium	5.7	5.0	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:33	QNW
Zinc	15	10	µg/L	1		SW-846 6020B	6/11/19	6/13/19 17:59	MJH

Project Location: Beaver St., Waltham, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Date Received: 6/7/2019

Sample Description:

Work Order: 19F0402

Field Sample #: GP-5 MW

Sampled: 6/5/2019 10:30

Sample ID: 19F0402-02

Sample Matrix: Ground Water

### Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	6/11/19	6/12/19 9:59	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-5 MW

Sampled: 6/5/2019 10:30

Sample ID: 19F0402-02

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	6/11/19	6/12/19 9:59	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 9:59	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	100	70-130						6/12/19 9:59	
Toluene-d8	97.2	70-130						6/12/19 9:59	
4-Bromofluorobenzene	96.8	70-130						6/12/19 9:59	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-5 MW

Sampled: 6/5/2019 10:30

Sample ID: 19F0402-02

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene (SIM)	ND	1.0	µg/L	1		SW-846 8270D	6/12/19	6/13/19 15:36	CLA
Benzo(a)pyrene (SIM)	ND	0.20	µg/L	1		SW-846 8270D	6/12/19	6/13/19 15:36	CLA
Benzo(b)fluoranthene (SIM)	ND	1.0	µg/L	1		SW-846 8270D	6/12/19	6/13/19 15:36	CLA
Benzo(k)fluoranthene (SIM)	ND	1.0	µg/L	1		SW-846 8270D	6/12/19	6/13/19 15:36	CLA
Chrysene (SIM)	ND	2.0	µg/L	1		SW-846 8270D	6/12/19	6/13/19 15:36	CLA
Dibenz(a,h)anthracene (SIM)	ND	0.50	µg/L	1		SW-846 8270D	6/12/19	6/13/19 15:36	CLA
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.50	µg/L	1		SW-846 8270D	6/12/19	6/13/19 15:36	CLA
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
o-Terphenyl (OTP) (SIM)	61.4		30-130				6/13/19 15:36		

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-5 MW

Sampled: 6/5/2019 10:30

Sample ID: 19F0402-02

Sample Matrix: Ground Water

## Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.053	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
alpha-BHC [1]	ND	0.053	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
beta-BHC [1]	ND	0.053	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
delta-BHC [1]	ND	0.053	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
gamma-BHC (Lindane) [1]	ND	0.032	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Chlordane [1]	ND	0.21	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
4,4'-DDD [1]	ND	0.042	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
4,4'-DDE [1]	ND	0.042	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
4,4'-DDT [1]	ND	0.042	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Dieldrin [1]	ND	0.0021	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Endosulfan I [1]	ND	0.053	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Endosulfan II [1]	ND	0.084	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Endosulfan sulfate [1]	ND	0.084	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Endrin [1]	ND	0.084	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Endrin ketone [1]	ND	0.084	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Heptachlor [1]	ND	0.053	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Heptachlor epoxide [1]	ND	0.053	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Hexachlorobenzene [1]	ND	0.053	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Methoxychlor [1]	ND	0.53	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:29	TG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	75.5	30-150							
Decachlorobiphenyl [2]	74.2	30-150							
Tetrachloro-m-xylene [1]	90.6	30-150							
Tetrachloro-m-xylene [2]	93.5	30-150							

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-5 MW

Sampled: 6/5/2019 10:30

Sample ID: 19F0402-02

Sample Matrix: Ground Water

## Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.21	µg/L	1		SW-846 8082A	6/9/19	6/11/19 17:01	PJG
Aroclor-1221 [1]	ND	0.21	µg/L	1		SW-846 8082A	6/9/19	6/11/19 17:01	PJG
Aroclor-1232 [1]	ND	0.21	µg/L	1		SW-846 8082A	6/9/19	6/11/19 17:01	PJG
Aroclor-1242 [1]	ND	0.21	µg/L	1		SW-846 8082A	6/9/19	6/11/19 17:01	PJG
Aroclor-1248 [1]	ND	0.21	µg/L	1		SW-846 8082A	6/9/19	6/11/19 17:01	PJG
Aroclor-1254 [1]	ND	0.21	µg/L	1		SW-846 8082A	6/9/19	6/11/19 17:01	PJG
Aroclor-1260 [1]	ND	0.21	µg/L	1		SW-846 8082A	6/9/19	6/11/19 17:01	PJG
Aroclor-1262 [1]	ND	0.21	µg/L	1		SW-846 8082A	6/9/19	6/11/19 17:01	PJG
Aroclor-1268 [1]	ND	0.21	µg/L	1		SW-846 8082A	6/9/19	6/11/19 17:01	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	73.9		30-150				6/11/19 17:01		
Decachlorobiphenyl [2]	71.7		30-150				6/11/19 17:01		
Tetrachloro-m-xylene [1]	83.8		30-150				6/11/19 17:01		
Tetrachloro-m-xylene [2]	78.1		30-150				6/11/19 17:01		



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-5 MW

Sampled: 6/5/2019 10:30

Sample ID: 19F0402-02

Sample Matrix: Ground Water

# Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	0.51	µg/L	1		SW-846 8151A	6/10/19	6/13/19 21:43	TG
2,4-DB [1]	ND	0.51	µg/L	1		SW-846 8151A	6/10/19	6/13/19 21:43	TG
2,4,5-TP (Silvex) [1]	ND	0.051	µg/L	1		SW-846 8151A	6/10/19	6/13/19 21:43	TG
2,4,5-T [1]	ND	0.10	µg/L	1		SW-846 8151A	6/10/19	6/13/19 21:43	TG
Dalapon [1]	ND	1.3	µg/L	1		SW-846 8151A	6/10/19	6/13/19 21:43	TG
Dicamba [1]	ND	0.051	µg/L	1		SW-846 8151A	6/10/19	6/13/19 21:43	TG
Dichloroprop [1]	ND	0.51	µg/L	1		SW-846 8151A	6/10/19	6/13/19 21:43	TG
Dinoseb [1]	ND	0.26	µg/L	1		SW-846 8151A	6/10/19	6/13/19 21:43	TG
MCPA [1]	ND	51	µg/L	1		SW-846 8151A	6/10/19	6/13/19 21:43	TG
MCPP [1]	ND	51	µg/L	1		SW-846 8151A	6/10/19	6/13/19 21:43	TG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	94.8		30-150				6/13/19 21:43		
2,4-Dichlorophenylacetic acid [2]	88.5		30-150				6/13/19 21:43		

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-5 MW

Sampled: 6/5/2019 10:30

Sample ID: 19F0402-02

Sample Matrix: Ground Water

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:13	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	60.1	40-140						6/12/19 19:13	
o-Terphenyl (OTP)	67.5	40-140						6/12/19 19:13	
2-Bromonaphthalene	125	40-140						6/12/19 19:13	
2-Fluorobiphenyl	135	40-140						6/12/19 19:13	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-5 MW

Sampled: 6/5/2019 10:30

Sample ID: 19F0402-02

Sample Matrix: Ground Water

## Petrolium Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
Benzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
Toluene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 22:31	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	115	70-130							
2,5-Dibromotoluene (PID)	111	70-130							

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-5 MW

Sampled: 6/5/2019 10:30

Sample ID: 19F0402-02

Sample Matrix: Ground Water

## Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:06	MJH
Arsenic	ND	0.80	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:06	MJH
Barium	42	10	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:06	MJH
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:38	QNW
Cadmium	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:06	MJH
Chromium	4.0	1.0	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:38	QNW
Lead	1.9	0.50	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:06	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/11/19	6/12/19 12:21	AJL
Nickel	ND	5.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:06	MJH
Selenium	ND	5.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:06	MJH
Silver	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:06	MJH
Thallium	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:06	MJH
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:38	QNW
Zinc	ND	10	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:06	MJH

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-7 MW

Sampled: 6/5/2019 12:05

Sample ID: 19F0402-03

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	6/11/19	6/12/19 10:25	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Chlorobenzene	11	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,4-Dichlorobenzene	5.4	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,2-Dichloroethane	1.7	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-7 MW

Sampled: 6/5/2019 12:05

Sample ID: 19F0402-03

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	6/11/19	6/12/19 10:25	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:25	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	99.3	70-130							
Toluene-d8	98.5	70-130							
4-Bromofluorobenzene	99.3	70-130							

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-7 MW

Sampled: 6/5/2019 12:05

Sample ID: 19F0402-03

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene (SIM)	ND	0.95	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:05	CLA
Benzo(a)pyrene (SIM)	ND	0.19	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:05	CLA
Benzo(b)fluoranthene (SIM)	ND	0.95	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:05	CLA
Benzo(k)fluoranthene (SIM)	ND	0.95	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:05	CLA
Chrysene (SIM)	ND	1.9	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:05	CLA
Dibenz(a,h)anthracene (SIM)	ND	0.48	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:05	CLA
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.48	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:05	CLA
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
o-Terphenyl (OTP) (SIM)		56.3	30-130					6/13/19 16:05	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-7 MW

Sampled: 6/5/2019 12:05

Sample ID: 19F0402-03

Sample Matrix: Ground Water

## Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.057	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
alpha-BHC [1]	5.2	0.57	µg/L	10		SW-846 8081B	6/9/19	6/12/19 10:16	TG
beta-BHC [1]	2.0	0.057	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
delta-BHC [2]	14	0.57	µg/L	10		SW-846 8081B	6/9/19	6/12/19 10:16	TG
gamma-BHC (Lindane) [1]	0.36	0.034	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
Chlordane [2]	3.2	0.23	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
4,4'-DDD [1]	ND	0.046	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
4,4'-DDE [1]	ND	0.046	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
4,4'-DDT [2]	0.057	0.046	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
Dieldrin [2]	0.19	0.0023	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
Endosulfan I [1]	ND	0.057	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
Endosulfan II [1]	ND	0.092	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
Endosulfan sulfate [1]	ND	0.092	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
Endrin [1]	ND	0.092	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
Endrin ketone [1]	ND	0.092	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
Heptachlor [1]	ND	0.057	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
Heptachlor epoxide [1]	0.15	0.057	µg/L	1	P-02	SW-846 8081B	6/9/19	6/11/19 21:56	TG
Hexachlorobenzene [1]	ND	0.057	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
Methoxychlor [1]	ND	0.57	µg/L	1		SW-846 8081B	6/9/19	6/11/19 21:56	TG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	89.7	30-150							
Decachlorobiphenyl [2]	89.1	30-150							
Tetrachloro-m-xylene [1]	93.8	30-150							
Tetrachloro-m-xylene [2]	94.0	30-150							



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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-7 MW

Sampled: 6/5/2019 12:05

Sample ID: 19F0402-03

Sample Matrix: Ground Water

## Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.23	µg/L	1		SW-846 8082A	6/9/19	6/12/19 10:17	PJG
Aroclor-1221 [1]	ND	0.23	µg/L	1		SW-846 8082A	6/9/19	6/12/19 10:17	PJG
Aroclor-1232 [1]	ND	0.23	µg/L	1		SW-846 8082A	6/9/19	6/12/19 10:17	PJG
Aroclor-1242 [1]	ND	0.23	µg/L	1		SW-846 8082A	6/9/19	6/12/19 10:17	PJG
Aroclor-1248 [1]	ND	0.23	µg/L	1		SW-846 8082A	6/9/19	6/12/19 10:17	PJG
Aroclor-1254 [1]	ND	0.23	µg/L	1		SW-846 8082A	6/9/19	6/12/19 10:17	PJG
Aroclor-1260 [1]	ND	0.23	µg/L	1		SW-846 8082A	6/9/19	6/12/19 10:17	PJG
Aroclor-1262 [1]	ND	0.23	µg/L	1		SW-846 8082A	6/9/19	6/12/19 10:17	PJG
Aroclor-1268 [1]	ND	0.23	µg/L	1		SW-846 8082A	6/9/19	6/12/19 10:17	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	84.1	30-150							
Decachlorobiphenyl [2]	76.3	30-150							
Tetrachloro-m-xylene [1]	75.8	30-150							
Tetrachloro-m-xylene [2]	70.0	30-150							

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-7 MW

Sampled: 6/5/2019 12:05

Sample ID: 19F0402-03

Sample Matrix: Ground Water

## Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	0.50	µg/L	1		SW-846 8151A	6/10/19	6/13/19 22:22	TG
2,4-DB [1]	ND	0.50	µg/L	1		SW-846 8151A	6/10/19	6/13/19 22:22	TG
2,4,5-TP (Silvex) [1]	ND	0.050	µg/L	1		SW-846 8151A	6/10/19	6/13/19 22:22	TG
2,4,5-T [1]	ND	0.10	µg/L	1		SW-846 8151A	6/10/19	6/13/19 22:22	TG
Dalapon [1]	ND	1.2	µg/L	1		SW-846 8151A	6/10/19	6/13/19 22:22	TG
Dicamba [1]	ND	0.050	µg/L	1		SW-846 8151A	6/10/19	6/13/19 22:22	TG
Dichloroprop [1]	ND	0.50	µg/L	1		SW-846 8151A	6/10/19	6/13/19 22:22	TG
Dinoseb [1]	ND	0.25	µg/L	1		SW-846 8151A	6/10/19	6/13/19 22:22	TG
MCPA [1]	ND	50	µg/L	1		SW-846 8151A	6/10/19	6/13/19 22:22	TG
MCPP [1]	ND	50	µg/L	1		SW-846 8151A	6/10/19	6/13/19 22:22	TG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,4-Dichlorophenylacetic acid [1]	81.7	30-150						6/13/19 22:22	
2,4-Dichlorophenylacetic acid [2]	85.5	30-150						6/13/19 22:22	

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Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-7 MW

Sampled: 6/5/2019 12:05

Sample ID: 19F0402-03

Sample Matrix: Ground Water

# Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	95	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
C19-C36 Aliphatics	ND	95	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
Unadjusted C11-C22 Aromatics	ND	95	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
C11-C22 Aromatics	ND	95	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
Acenaphthene	ND	1.9	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
Acenaphthylene	ND	1.9	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
Anthracene	ND	1.9	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
Benzo(g,h,i)perylene	ND	1.9	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
Fluoranthene	ND	1.9	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
Fluorene	ND	1.9	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
2-Methylnaphthalene	ND	1.9	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
Naphthalene	ND	1.9	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
Phenanthrene	ND	1.9	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
Pyrene	ND	1.9	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:32	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	60.2	40-140						6/12/19 19:32	
o-Terphenyl (OTP)	63.5	40-140						6/12/19 19:32	
2-Bromonaphthalene	86.1	40-140						6/12/19 19:32	
2-Fluorobiphenyl	92.4	40-140						6/12/19 19:32	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-7 MW

Sampled: 6/5/2019 12:05

Sample ID: 19F0402-03

Sample Matrix: Ground Water

## Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
Benzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
Toluene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:01	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	102	70-130							
2,5-Dibromotoluene (PID)	101	70-130							

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: GP-7 MW

Sampled: 6/5/2019 12:05

Sample ID: 19F0402-03

Sample Matrix: Ground Water

## Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:10	MJH
Arsenic	12	0.80	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:10	MJH
Barium	20	10	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:10	MJH
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:41	QNW
Cadmium	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:10	MJH
Chromium	4.7	1.0	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:41	QNW
Lead	3.2	0.50	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:10	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/11/19	6/12/19 12:23	AJL
Nickel	ND	5.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:10	MJH
Selenium	ND	5.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:10	MJH
Silver	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:10	MJH
Thallium	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:10	MJH
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:41	QNW
Zinc	12	10	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:10	MJH

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: MW-2

Sampled: 6/5/2019 13:30

Sample ID: 19F0402-04

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	6/11/19	6/12/19 10:52	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Ethylbenzene	2.4	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: MW-2

Sampled: 6/5/2019 13:30

Sample ID: 19F0402-04

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	6/11/19	6/12/19 10:52	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/11/19	6/12/19 10:52	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
1,2-Dichloroethane-d4	98.0	70-130						6/12/19 10:52	
Toluene-d8	98.0	70-130						6/12/19 10:52	
4-Bromofluorobenzene	97.6	70-130						6/12/19 10:52	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: MW-2

Sampled: 6/5/2019 13:30

Sample ID: 19F0402-04

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene (SIM)	ND	0.99	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:34	CLA
Benzo(a)pyrene (SIM)	ND	0.20	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:34	CLA
Benzo(b)fluoranthene (SIM)	ND	0.99	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:34	CLA
Benzo(k)fluoranthene (SIM)	ND	0.99	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:34	CLA
Chrysene (SIM)	ND	2.0	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:34	CLA
Dibenz(a,h)anthracene (SIM)	ND	0.49	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:34	CLA
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.49	µg/L	1		SW-846 8270D	6/12/19	6/13/19 16:34	CLA
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
o-Terphenyl (OTP) (SIM)	62.7		30-130				6/13/19 16:34		



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: MW-2

Sampled: 6/5/2019 13:30

Sample ID: 19F0402-04

Sample Matrix: Ground Water

## Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	150	99	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
C19-C36 Aliphatics	ND	99	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
Unadjusted C11-C22 Aromatics	ND	99	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
C11-C22 Aromatics	ND	99	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	6/11/19	6/12/19 19:51	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	62.4	40-140						6/12/19 19:51	
p-Terphenyl (OTP)	65.7	40-140						6/12/19 19:51	
2-Bromonaphthalene	83.6	40-140						6/12/19 19:51	
2-Fluorobiphenyl	91.1	40-140						6/12/19 19:51	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Beaver St., Waltham, MA

Sample Description:

Work Order: 19F0402

Date Received: 6/7/2019

Field Sample #: MW-2

Sampled: 6/5/2019 13:30

Sample ID: 19F0402-04

Sample Matrix: Ground Water

## Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
Benzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
Ethylbenzene	2.2	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
Toluene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	6/11/19	6/11/19 23:30	KMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	96.4	70-130						6/11/19 23:30	
2,5-Dibromotoluene (PID)	95.9	70-130						6/11/19 23:30	

Project Location: Beaver St., Waltham, MA 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Date Received: 6/7/2019

Sample Description:

Work Order: 19F0402

Field Sample #: MW-2

Sampled: 6/5/2019 13:30

Sample ID: 19F0402-04

Sample Matrix: Ground Water

### Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:13	MJH
Arsenic	ND	0.80	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:13	MJH
Barium	33	10	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:13	MJH
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:44	QNW
Cadmium	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:13	MJH
Chromium	1.1	1.0	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:44	QNW
Lead	ND	0.50	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:13	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	6/11/19	6/12/19 12:24	AJL
Nickel	ND	5.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:13	MJH
Selenium	ND	5.0	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:13	MJH
Silver	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:13	MJH
Thallium	ND	0.20	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:13	MJH
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	6/11/19	6/14/19 8:44	QNW
Zinc	ND	10	µg/L	1		SW-846 6020B	6/11/19	6/13/19 18:13	MJH

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

### Sample Extraction Data

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F0402-01 [GP-3 MW]	B232960	1000	2.00	06/11/19
19F0402-02 [GP-5 MW]	B232960	1000	2.00	06/11/19
19F0402-03 [GP-7 MW]	B232960	945	1.80	06/11/19
19F0402-04 [MW-2]	B232960	1020	2.00	06/11/19

Prep Method: MA VPH-MADEP-VPH-Feb 2018 Rev 2.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F0402-01 [GP-3 MW]	B233005	5	5.00	06/11/19
19F0402-02 [GP-5 MW]	B233005	5	5.00	06/11/19
19F0402-03 [GP-7 MW]	B233005	5	5.00	06/11/19
19F0402-04 [MW-2]	B233005	5	5.00	06/11/19

Prep Method: SW-846 3005A Dissolved-SW-846 6020B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F0402-01 [GP-3 MW]	B233013	50.0	50.0	06/11/19
19F0402-02 [GP-5 MW]	B233013	50.0	50.0	06/11/19
19F0402-03 [GP-7 MW]	B233013	50.0	50.0	06/11/19
19F0402-04 [MW-2]	B233013	50.0	50.0	06/11/19

Prep Method: SW-846 7470A Dissolved-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F0402-01 [GP-3 MW]	B233055	6.00	6.00	06/11/19
19F0402-02 [GP-5 MW]	B233055	6.00	6.00	06/11/19
19F0402-03 [GP-7 MW]	B233055	6.00	6.00	06/11/19
19F0402-04 [MW-2]	B233055	6.00	6.00	06/11/19

Prep Method: SW-846 3510C-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F0402-02 [GP-5 MW]	B232858	950	10.0	06/09/19
19F0402-03 [GP-7 MW]	B232858	870	10.0	06/09/19

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F0402-02 [GP-5 MW]	B232856	950	10.0	06/09/19
19F0402-03 [GP-7 MW]	B232856	870	10.0	06/09/19

Prep Method: SW-846 3510C-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F0402-02 [GP-5 MW]	B232959	980	5.00	06/10/19
19F0402-03 [GP-7 MW]	B232959	1000	5.00	06/10/19

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### Sample Extraction Data

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F0402-01 [GP-3 MW]	B232980	5	5.00	06/11/19
19F0402-02 [GP-5 MW]	B232980	5	5.00	06/11/19
19F0402-03 [GP-7 MW]	B232980	5	5.00	06/11/19
19F0402-04 [MW-2]	B232980	5	5.00	06/11/19

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F0402-01 [GP-3 MW]	B233211	1000	2.00	06/12/19
19F0402-02 [GP-5 MW]	B233211	1000	2.00	06/12/19
19F0402-03 [GP-7 MW]	B233211	945	1.80	06/12/19
19F0402-04 [MW-2]	B233211	1020	2.00	06/12/19

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232980 - SW-846 5030B										
Blank (B232980-BLK1)										
Prepared: 06/11/19 Analyzed: 06/12/19										
Acetone	ND	10	µg/L							R-05
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	1.0	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							
2-Butanone (MEK)	ND	10	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	0.50	µg/L							V-05
cis-1,3-Dichloropropene	ND	0.40	µg/L							
trans-1,3-Dichloropropene	ND	0.40	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	1.0	µg/L							V-16
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232980 - SW-846 5030B										
Blank (B232980-BLK1)										
Prepared: 06/11/19 Analyzed: 06/12/19										
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	2.0	µg/L							
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	23.7		µg/L	25.0		94.6	70-130			
Surrogate: Toluene-d8	24.8		µg/L	25.0		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	24.9		µg/L	25.0		99.5	70-130			
LCS (B232980-BS1)										
Prepared: 06/11/19 Analyzed: 06/12/19										
Acetone	116	10	µg/L	100		116	40-160			
tert-Amyl Methyl Ether (TAME)	9.38	0.50	µg/L	10.0		93.8	70-130			R-05 †
Benzene	10.2	1.0	µg/L	10.0		102	70-130			
Bromobenzene	10.8	1.0	µg/L	10.0		108	70-130			
Bromochloromethane	10.4	1.0	µg/L	10.0		104	70-130			
Bromodichloromethane	10.4	1.0	µg/L	10.0		104	70-130			
Bromoform	10.0	1.0	µg/L	10.0		100	70-130			
Bromomethane	4.10	2.0	µg/L	10.0		41.0	40-160			L-14 †
2-Butanone (MEK)	98.6	10	µg/L	100		98.6	40-160			†
n-Butylbenzene	10.3	1.0	µg/L	10.0		103	70-130			
sec-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130			
tert-Butylbenzene	10.4	1.0	µg/L	10.0		104	70-130			
tert-Butyl Ethyl Ether (TBEE)	9.14	0.50	µg/L	10.0		91.4	70-130			
Carbon Disulfide	10.2	5.0	µg/L	10.0		102	70-130			
Carbon Tetrachloride	9.89	1.0	µg/L	10.0		98.9	70-130			
Chlorobenzene	11.1	1.0	µg/L	10.0		111	70-130			
Chlorodibromomethane	9.64	0.50	µg/L	10.0		96.4	70-130			
Chloroethane	9.59	2.0	µg/L	10.0		95.9	70-130			
Chloroform	10.3	2.0	µg/L	10.0		103	70-130			
Chloromethane	13.5	2.0	µg/L	10.0		135	40-160			L-14, V-20 †
2-Chlorotoluene	11.0	1.0	µg/L	10.0		110	70-130			
4-Chlorotoluene	11.0	1.0	µg/L	10.0		110	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	10.2	2.0	µg/L	10.0		102	70-130			
1,2-Dibromoethane (EDB)	10.6	0.50	µg/L	10.0		106	70-130			
Bromomethane	10.0	1.0	µg/L	10.0		100	70-130			
1,2-Dichlorobenzene	11.0	1.0	µg/L	10.0		110	70-130			
1,3-Dichlorobenzene	11.2	1.0	µg/L	10.0		112	70-130			
1,4-Dichlorobenzene	10.8	1.0	µg/L	10.0		108	70-130			

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232980 - SW-846 5030B										
LCS (B232980-BS1)										
Prepared: 06/11/19 Analyzed: 06/12/19										
Dichlorodifluoromethane (Freon 12)	6.89	2.0	µg/L	10.0		68.9	40-160			
1,1-Dichloroethane	10.0	1.0	µg/L	10.0		100	70-130			L-14 †
1,2-Dichloroethane	10.3	1.0	µg/L	10.0		103	70-130			
1,1-Dichloroethylene	10.1	1.0	µg/L	10.0		101	70-130			
cis-1,2-Dichloroethylene	9.87	1.0	µg/L	10.0		98.7	70-130			
trans-1,2-Dichloroethylene	9.99	1.0	µg/L	10.0		99.9	70-130			
1,2-Dichloropropane	10.4	1.0	µg/L	10.0		104	70-130			
1,3-Dichloropropane	10.1	0.50	µg/L	10.0		101	70-130			
2,2-Dichloropropane	8.05	1.0	µg/L	10.0		80.5	70-130			
1,1-Dichloropropene	9.91	0.50	µg/L	10.0		99.1	70-130			V-05
cis-1,3-Dichloropropene	9.60	0.40	µg/L	10.0		96.0	70-130			
trans-1,3-Dichloropropene	9.39	0.40	µg/L	10.0		93.9	70-130			
Diethyl Ether	9.90	2.0	µg/L	10.0		99.0	70-130			
Diisopropyl Ether (DIPE)	9.61	0.50	µg/L	10.0		96.1	70-130			
1,4-Dioxane	107	50	µg/L	100		107	40-160			V-16 †
Ethylbenzene	10.9	1.0	µg/L	10.0		109	70-130			
Hexachlorobutadiene	11.4	0.60	µg/L	10.0		114	70-130			
2-Hexanone (MBK)	98.6	10	µg/L	100		98.6	40-160			†
Isopropylbenzene (Cumene)	11.2	1.0	µg/L	10.0		112	70-130			
Isopropyltoluene (p-Cymene)	10.5	1.0	µg/L	10.0		105	70-130			
Methyl tert-Butyl Ether (MTBE)	10.3	1.0	µg/L	10.0		103	70-130			
Methylene Chloride	10.3	5.0	µg/L	10.0		103	70-130			
4-Methyl-2-pentanone (MIBK)	97.8	10	µg/L	100		97.8	40-160			†
Naphthalene	10.7	2.0	µg/L	10.0		107	70-130			
n-Propylbenzene	11.1	1.0	µg/L	10.0		111	70-130			
Styrene	11.0	1.0	µg/L	10.0		110	70-130			
1,1,1,2-Tetrachloroethane	11.1	1.0	µg/L	10.0		111	70-130			
1,1,2,2-Tetrachloroethane	11.0	0.50	µg/L	10.0		110	70-130			
Tetrachloroethylene	11.5	1.0	µg/L	10.0		115	70-130			
Tetrahydrofuran	10.7	2.0	µg/L	10.0		107	70-130			
Toluene	10.4	1.0	µg/L	10.0		104	70-130			
1,2,3-Trichlorobenzene	10.7	2.0	µg/L	10.0		107	70-130			
1,2,4-Trichlorobenzene	10.7	1.0	µg/L	10.0		107	70-130			
1,1,1-Trichloroethane	10.2	1.0	µg/L	10.0		102	70-130			
1,1,2-Trichloroethane	10.8	1.0	µg/L	10.0		108	70-130			
Trichloroethylene	11.2	1.0	µg/L	10.0		112	70-130			
Trichlorofluoromethane (Freon 11)	9.14	2.0	µg/L	10.0		91.4	70-130			
1,2,3-Trichloropropane	10.9	2.0	µg/L	10.0		109	70-130			
1,2,4-Trimethylbenzene	10.0	1.0	µg/L	10.0		100	70-130			
1,3,5-Trimethylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
Vinyl Chloride	8.55	2.0	µg/L	10.0		85.5	70-130			
m+p Xylene	22.0	2.0	µg/L	20.0		110	70-130			
o-Xylene	11.2	1.0	µg/L	10.0		112	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.2		µg/L	25.0		97.0	70-130			
Surrogate: Toluene-d8	24.8		µg/L	25.0		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	25.4		µg/L	25.0		102	70-130			



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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232980 - SW-846 5030B										
LCS Dup (B232980-BSD1)										
Prepared: 06/11/19 Analyzed: 06/12/19										
Acetone	93.3	10	µg/L	100		93.3	40-160	21.4 *	20	R-05 †
tert-Amyl Methyl Ether (TAME)	9.37	0.50	µg/L	10.0		93.7	70-130	0.107	20	
Benzene	9.98	1.0	µg/L	10.0		99.8	70-130	2.08	20	
Bromobenzene	10.4	1.0	µg/L	10.0		104	70-130	3.11	20	
Bromochloromethane	10.2	1.0	µg/L	10.0		102	70-130	1.45	20	
Bromodichloromethane	10.2	1.0	µg/L	10.0		102	70-130	1.65	20	
Bromoform	9.67	1.0	µg/L	10.0		96.7	70-130	3.46	20	
Bromomethane	4.13	2.0	µg/L	10.0		41.3	40-160	0.729	20	L-14 †
2-Butanone (MEK)	90.4	10	µg/L	100		90.4	40-160	8.71	20	†
n-Butylbenzene	9.91	1.0	µg/L	10.0		99.1	70-130	3.76	20	
sec-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130	0.00	20	
tert-Butylbenzene	10.3	1.0	µg/L	10.0		103	70-130	1.06	20	
tert-Butyl Ethyl Ether (TBEE)	9.10	0.50	µg/L	10.0		91.0	70-130	0.439	20	
Carbon Disulfide	9.50	5.0	µg/L	10.0		95.0	70-130	7.01	20	
Carbon Tetrachloride	9.76	1.0	µg/L	10.0		97.6	70-130	1.32	20	
Chlorobenzene	11.0	1.0	µg/L	10.0		110	70-130	0.724	20	
Chlorodibromomethane	9.67	0.50	µg/L	10.0		96.7	70-130	0.311	20	
Chloroethane	9.60	2.0	µg/L	10.0		96.0	70-130	0.104	20	
Chloroform	10.1	2.0	µg/L	10.0		101	70-130	1.57	20	
Chloromethane	13.4	2.0	µg/L	10.0		134	40-160	0.594	20	L-14, V-20 †
2-Chlorotoluene	10.4	1.0	µg/L	10.0		104	70-130	6.16	20	
4-Chlorotoluene	10.6	1.0	µg/L	10.0		106	70-130	3.52	20	
1,2-Dibromo-3-chloropropane (DBCP)	9.81	2.0	µg/L	10.0		98.1	70-130	4.00	20	
1,2-Dibromoethane (EDB)	10.7	0.50	µg/L	10.0		107	70-130	0.375	20	
Dibromomethane	10.2	1.0	µg/L	10.0		102	70-130	1.98	20	
1,2-Dichlorobenzene	10.8	1.0	µg/L	10.0		108	70-130	1.19	20	
1,3-Dichlorobenzene	11.0	1.0	µg/L	10.0		110	70-130	2.43	20	
1,4-Dichlorobenzene	10.7	1.0	µg/L	10.0		107	70-130	0.742	20	
Dichlorodifluoromethane (Freon 12)	6.69	2.0	µg/L	10.0		66.9	40-160	2.95	20	L-14 †
1,1-Dichloroethane	9.69	1.0	µg/L	10.0		96.9	70-130	3.45	20	
1,2-Dichloroethane	10.2	1.0	µg/L	10.0		102	70-130	1.56	20	
1,1-Dichloroethylene	9.99	1.0	µg/L	10.0		99.9	70-130	1.10	20	
cis-1,2-Dichloroethylene	9.73	1.0	µg/L	10.0		97.3	70-130	1.43	20	
trans-1,2-Dichloroethylene	9.58	1.0	µg/L	10.0		95.8	70-130	4.19	20	
1,2-Dichloropropane	10.4	1.0	µg/L	10.0		104	70-130	0.0965	20	
1,3-Dichloropropane	9.72	0.50	µg/L	10.0		97.2	70-130	4.23	20	
2,2-Dichloropropane	7.75	1.0	µg/L	10.0		77.5	70-130	3.80	20	V-05
1,1-Dichloropropene	9.80	0.50	µg/L	10.0		98.0	70-130	1.12	20	
cis-1,3-Dichloropropene	9.61	0.40	µg/L	10.0		96.1	70-130	0.104	20	
trans-1,3-Dichloropropene	9.40	0.40	µg/L	10.0		94.0	70-130	0.106	20	
Diethyl Ether	10.1	2.0	µg/L	10.0		101	70-130	2.10	20	
Diisopropyl Ether (DIPE)	9.41	0.50	µg/L	10.0		94.1	70-130	2.10	20	
1,4-Dioxane	97.7	50	µg/L	100		97.7	40-160	9.13	20	V-16 †
Ethylbenzene	10.4	1.0	µg/L	10.0		104	70-130	4.70	20	
Hexachlorobutadiene	11.7	0.60	µg/L	10.0		117	70-130	2.34	20	
2-Hexanone (MBK)	93.7	10	µg/L	100		93.7	40-160	5.10	20	†
Isopropylbenzene (Cumene)	10.6	1.0	µg/L	10.0		106	70-130	4.95	20	
Isopropyltoluene (p-Cymene)	10.2	1.0	µg/L	10.0		102	70-130	2.99	20	
Methyl tert-Butyl Ether (MTBE)	10.2	1.0	µg/L	10.0		102	70-130	1.27	20	
Methylene Chloride	10.4	5.0	µg/L	10.0		104	70-130	0.483	20	
4-Methyl-2-pentanone (MIBK)	95.0	10	µg/L	100		95.0	40-160	2.85	20	†
Naphthalene	10.7	2.0	µg/L	10.0		107	70-130	0.0932	20	

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232980 - SW-846 5030B										
LCS Dup (B232980-BS01)										
Prepared: 06/11/19 Analyzed: 06/12/19										
n-Propylbenzene	10.6	1.0	µg/L	10.0		106	70-130	4.60	20	
Styrene	10.6	1.0	µg/L	10.0		106	70-130	3.90	20	
1,1,1,2-Tetrachloroethane	10.7	1.0	µg/L	10.0		107	70-130	3.30	20	
1,1,2,2-Tetrachloroethane	11.3	0.50	µg/L	10.0		113	70-130	2.15	20	
Tetrachloroethylene	11.0	1.0	µg/L	10.0		110	70-130	4.34	20	
Tetrahydrofuran	10.2	2.0	µg/L	10.0		102	70-130	5.18	20	
Toluene	10.5	1.0	µg/L	10.0		105	70-130	0.953	20	
1,2,3-Trichlorobenzene	10.3	2.0	µg/L	10.0		103	70-130	3.61	20	
1,2,4-Trichlorobenzene	10.7	1.0	µg/L	10.0		107	70-130	0.748	20	
1,1,1-Trichloroethane	9.89	1.0	µg/L	10.0		98.9	70-130	3.28	20	
1,1,2-Trichloroethane	11.1	1.0	µg/L	10.0		111	70-130	2.83	20	
Trichloroethylene	10.8	1.0	µg/L	10.0		108	70-130	3.47	20	
Trichlorofluoromethane (Freon 11)	8.73	2.0	µg/L	10.0		87.3	70-130	4.59	20	
1,2,3-Trichloropropane	10.6	2.0	µg/L	10.0		106	70-130	2.60	20	
1,2,4-Trimethylbenzene	10.1	1.0	µg/L	10.0		101	70-130	0.896	20	
1,3,5-Trimethylbenzene	10.5	1.0	µg/L	10.0		105	70-130	2.17	20	
Vinyl Chloride	8.31	2.0	µg/L	10.0		83.1	70-130	2.85	20	
m+p Xylene	21.1	2.0	µg/L	20.0		105	70-130	4.18	20	
o-Xylene	10.8	1.0	µg/L	10.0		108	70-130	3.00	20	
Surrogate: 1,2-Dichloroethane-d4	23.5		µg/L	25.0		94.2	70-130			
Surrogate: Toluene-d8	24.7		µg/L	25.0		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	25.5		µg/L	25.0		102	70-130			

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B233211 - SW-846 3510C</b>										
<b>Blank (B233211-BLK1)</b>										
Prepared: 06/12/19 Analyzed: 06/13/19										
Benzo(a)anthracene (SIM)	ND	1.0	µg/L							
Benzo(a)pyrene (SIM)	ND	0.20	µg/L							
Benzo(b)fluoranthene (SIM)	ND	1.0	µg/L							
Benzo(k)fluoranthene (SIM)	ND	1.0	µg/L							
Chrysene (SIM)	ND	2.0	µg/L							
Dibenz(a,h)anthracene (SIM)	ND	0.50	µg/L							
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.50	µg/L							
Surrogate: o-Terphenyl (OTP) (SIM)	62.4		µg/L	100		62.4	30-130			
<b>LCS (B233211-BS1)</b>										
Prepared: 06/12/19 Analyzed: 06/13/19										
Benzo(a)anthracene (SIM)	67.4	20	µg/L	100		67.4	40-140			
Benzo(a)pyrene (SIM)	72.3	4.0	µg/L	100		72.3	40-140			
Benzo(b)fluoranthene (SIM)	71.3	20	µg/L	100		71.3	40-140			
Benzo(k)fluoranthene (SIM)	75.3	20	µg/L	100		75.3	40-140			
Chrysene (SIM)	69.4	40	µg/L	100		69.4	40-140			
Dibenz(a,h)anthracene (SIM)	80.3	10	µg/L	100		80.3	40-140			
Indeno(1,2,3-cd)pyrene (SIM)	75.0	10	µg/L	100		75.0	40-140			
Surrogate: o-Terphenyl (OTP) (SIM)	73.2		µg/L	100		73.2	30-130			
<b>CS Dup (B233211-BSD1)</b>										
Prepared: 06/12/19 Analyzed: 06/13/19										
Benzo(a)anthracene (SIM)	56.3	20	µg/L	100		56.3	40-140	18.0	20	
Benzo(a)pyrene (SIM)	60.0	4.0	µg/L	100		60.0	40-140	18.6	20	
Benzo(b)fluoranthene (SIM)	59.6	20	µg/L	100		59.6	40-140	17.9	20	
Benzo(k)fluoranthene (SIM)	63.0	20	µg/L	100		63.0	40-140	17.8	20	
Chrysene (SIM)	58.3	40	µg/L	100		58.3	40-140	17.4	20	
Dibenz(a,h)anthracene (SIM)	67.0	10	µg/L	100		67.0	40-140	18.0	20	
Indeno(1,2,3-cd)pyrene (SIM)	62.2	10	µg/L	100		62.2	40-140	18.7	20	
Surrogate: o-Terphenyl (OTP) (SIM)	61.4		µg/L	100		61.4	30-130			

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## QUALITY CONTROL

## Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232858 - SW-846 3510C										
Blank (B232858-BLK1)										
Prepared: 06/09/19 Analyzed: 06/12/19										
Aldrin	ND	0.050	µg/L							
Aldrin [2C]	ND	0.050	µg/L							
alpha-BHC	ND	0.050	µg/L							
alpha-BHC [2C]	ND	0.050	µg/L							
beta-BHC	ND	0.050	µg/L							
beta-BHC [2C]	ND	0.050	µg/L							
delta-BHC	ND	0.050	µg/L							
delta-BHC [2C]	ND	0.050	µg/L							
gamma-BHC (Lindane)	ND	0.030	µg/L							
gamma-BHC (Lindane) [2C]	ND	0.030	µg/L							
Chlordane	ND	0.20	µg/L							
Chlordane [2C]	ND	0.20	µg/L							
4,4'-DDD	ND	0.040	µg/L							
4,4'-DDD [2C]	ND	0.040	µg/L							
4,4'-DDE	ND	0.040	µg/L							
4,4'-DDE [2C]	ND	0.040	µg/L							
4,4'-DDT	ND	0.040	µg/L							
4,4'-DDT [2C]	ND	0.040	µg/L							
Dieldrin	ND	0.0020	µg/L							
Dieldrin [2C]	ND	0.0020	µg/L							
Endosulfan I	ND	0.050	µg/L							
Endosulfan I [2C]	ND	0.050	µg/L							
Endosulfan II	ND	0.080	µg/L							
Endosulfan II [2C]	ND	0.080	µg/L							
Endosulfan Sulfate	ND	0.080	µg/L							
Endosulfan Sulfate [2C]	ND	0.080	µg/L							
Endrin	ND	0.080	µg/L							
Endrin [2C]	ND	0.080	µg/L							
Endrin Aldehyde	ND	0.080	µg/L							
Endrin Aldehyde [2C]	ND	0.080	µg/L							
Endrin Ketone	ND	0.080	µg/L							
Endrin Ketone [2C]	ND	0.080	µg/L							
Heptachlor	ND	0.050	µg/L							
Heptachlor [2C]	ND	0.050	µg/L							
Heptachlor Epoxide	ND	0.050	µg/L							
Heptachlor Epoxide [2C]	ND	0.050	µg/L							
Hexachlorobenzene	ND	0.050	µg/L							
Hexachlorobenzene [2C]	ND	0.050	µg/L							
Methoxychlor	ND	0.50	µg/L							
Methoxychlor [2C]	ND	0.50	µg/L							
Surrogate: Decachlorobiphenyl	1.74		µg/L	2.00		86.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.77		µg/L	2.00		88.4	30-150			
Surrogate: Tetrachloro-m-xylene	1.60		µg/L	2.00		79.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.79		µg/L	2.00		89.6	30-150			

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## QUALITY CONTROL

## Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B232858 - SW-846 3510C

## LCS (B232858-BS1)

Prepared: 06/09/19 Analyzed: 06/12/19

Aldrin	0.91	0.050	µg/L	1.00		90.5	40-140			
Aldrin [2C]	0.90	0.050	µg/L	1.00		90.4	40-140			
alpha-BHC	0.91	0.050	µg/L	1.00		90.6	40-140			
alpha-BHC [2C]	0.91	0.050	µg/L	1.00		90.6	40-140			
beta-BHC	0.88	0.050	µg/L	1.00		87.7	40-140			
beta-BHC [2C]	0.85	0.050	µg/L	1.00		84.6	40-140			
delta-BHC	0.63	0.050	µg/L	1.00		62.9	40-140			
delta-BHC [2C]	0.67	0.050	µg/L	1.00		66.9	40-140			
gamma-BHC (Lindane)	0.91	0.030	µg/L	1.00		91.0	40-140			
gamma-BHC (Lindane) [2C]	0.92	0.030	µg/L	1.00		92.0	40-140			
4,4'-DDD	0.93	0.040	µg/L	1.00		93.4	40-140			
4,4'-DDD [2C]	0.96	0.040	µg/L	1.00		95.8	40-140			
4,4'-DDE	0.95	0.040	µg/L	1.00		94.8	40-140			
4,4'-DDE [2C]	0.94	0.040	µg/L	1.00		94.2	40-140			
4,4'-DDT	0.95	0.040	µg/L	1.00		95.5	40-140			
4,4'-DDT [2C]	0.91	0.040	µg/L	1.00		91.4	40-140			
Dieldrin	0.93	0.0020	µg/L	1.00		92.7	40-140			
Dieldrin [2C]	0.92	0.0020	µg/L	1.00		91.8	40-140			
Endosulfan I	0.85	0.050	µg/L	1.00		85.2	40-140			
Endosulfan I [2C]	0.87	0.050	µg/L	1.00		87.4	40-140			
Endosulfan II	0.80	0.080	µg/L	1.00		79.8	40-140			
Endosulfan II [2C]	0.79	0.080	µg/L	1.00		79.3	40-140			
Endosulfan Sulfate	0.93	0.080	µg/L	1.00		93.1	40-140			
Endosulfan Sulfate [2C]	0.91	0.080	µg/L	1.00		91.3	40-140			
Endrin	0.94	0.080	µg/L	1.00		94.0	40-140			
Endrin [2C]	0.91	0.080	µg/L	1.00		91.1	40-140			
Endrin Ketone	0.90	0.080	µg/L	1.00		90.3	40-140			
Endrin Ketone [2C]	0.95	0.080	µg/L	1.00		95.3	40-140			
Heptachlor	0.68	0.050	µg/L	1.00		68.2	40-140			
Heptachlor [2C]	0.91	0.050	µg/L	1.00		90.6	40-140			
Heptachlor Epoxide	0.89	0.050	µg/L	1.00		89.3	40-140			
Heptachlor Epoxide [2C]	0.87	0.050	µg/L	1.00		87.4	40-140			
Hexachlorobenzene	1.0	0.050	µg/L	1.00		101	40-140			
Hexachlorobenzene [2C]	0.91	0.050	µg/L	1.00		90.9	40-140			
Methoxychlor	0.90	0.50	µg/L	1.00		90.2	40-140			
Methoxychlor [2C]	0.90	0.50	µg/L	1.00		90.1	40-140			
Surrogate: Decachlorobiphenyl	1.90		µg/L	2.00		95.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.96		µg/L	2.00		97.8	30-150			
Surrogate: Tetrachloro-m-xylene	1.85		µg/L	2.00		92.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.90		µg/L	2.00		95.0	30-150			

## LCS Dup (B232858-BSD1)

Prepared: 06/09/19 Analyzed: 06/12/19

Aldrin	0.93	0.050	µg/L	1.00		92.9	40-140	2.57	30	
Aldrin [2C]	0.90	0.050	µg/L	1.00		90.3	40-140	0.163	30	
alpha-BHC	0.92	0.050	µg/L	1.00		92.0	40-140	1.51	30	
alpha-BHC [2C]	0.90	0.050	µg/L	1.00		89.9	40-140	0.749	30	
beta-BHC	0.87	0.050	µg/L	1.00		86.9	40-140	0.858	30	
beta-BHC [2C]	0.81	0.050	µg/L	1.00		81.3	40-140	3.97	30	
gamma-BHC	0.49	0.050	µg/L	1.00		49.2	40-140	24.3	30	
gamma-BHC [2C]	0.51	0.050	µg/L	1.00		50.8	40-140	27.5	30	
gamma-BHC (Lindane)	0.92	0.030	µg/L	1.00		91.9	40-140	0.984	30	
gamma-BHC (Lindane) [2C]	0.89	0.030	µg/L	1.00		89.4	40-140	2.79	30	

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## QUALITY CONTROL

## Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232858 - SW-846 3510C										
LCS Dup (B232858-BSD1)										
Prepared: 06/09/19 Analyzed: 06/12/19										
4,4'-DDD	0.95	0.040	µg/L	1.00		95.2	40-140	1.92	30	
4,4'-DDD [2C]	0.96	0.040	µg/L	1.00		96.4	40-140	0.599	30	
4,4'-DDE	0.96	0.040	µg/L	1.00		96.4	40-140	1.73	30	
4,4'-DDE [2C]	0.95	0.040	µg/L	1.00		94.8	40-140	0.732	30	
4,4'-DDT	0.97	0.040	µg/L	1.00		97.2	40-140	1.83	30	
4,4'-DDT [2C]	0.92	0.040	µg/L	1.00		92.5	40-140	1.19	30	
Dieldrin	0.94	0.0020	µg/L	1.00		94.0	40-140	1.38	30	
Dieldrin [2C]	0.92	0.0020	µg/L	1.00		91.5	40-140	0.253	30	
Endosulfan I	0.83	0.050	µg/L	1.00		82.7	40-140	2.93	30	
Endosulfan I [2C]	0.83	0.050	µg/L	1.00		83.2	40-140	4.94	30	
Endosulfan II	0.79	0.080	µg/L	1.00		78.7	40-140	1.45	30	
Endosulfan II [2C]	0.77	0.080	µg/L	1.00		77.2	40-140	2.76	30	
Endosulfan Sulfate	0.94	0.080	µg/L	1.00		93.7	40-140	0.615	30	
Endosulfan Sulfate [2C]	0.91	0.080	µg/L	1.00		90.6	40-140	0.699	30	
Endrin	0.95	0.080	µg/L	1.00		95.3	40-140	1.33	30	
Endrin [2C]	0.91	0.080	µg/L	1.00		90.7	40-140	0.470	30	
Endrin Ketone	0.92	0.080	µg/L	1.00		92.2	40-140	2.03	30	
Endrin Ketone [2C]	1.0	0.080	µg/L	1.00		101	40-140	5.76	30	
Heptachlor	0.70	0.050	µg/L	1.00		70.4	40-140	3.17	30	
Heptachlor [2C]	0.90	0.050	µg/L	1.00		89.8	40-140	0.844	30	
Heptachlor Epoxide	0.91	0.050	µg/L	1.00		90.7	40-140	1.60	30	
Heptachlor Epoxide [2C]	0.87	0.050	µg/L	1.00		86.6	40-140	0.953	30	
Hexachlorobenzene	1.0	0.050	µg/L	1.00		104	40-140	3.27	30	
Hexachlorobenzene [2C]	0.91	0.050	µg/L	1.00		91.3	40-140	0.470	30	
Methoxychlor	0.91	0.50	µg/L	1.00		91.5	40-140	1.45	30	
Methoxychlor [2C]	0.91	0.50	µg/L	1.00		90.5	40-140	0.479	30	
Surrogate: Decachlorobiphenyl	1.92		µg/L	2.00		96.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.96		µg/L	2.00		97.9	30-150			
Surrogate: Tetrachloro-m-xylene	1.91		µg/L	2.00		95.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.90		µg/L	2.00		95.1	30-150			

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## QUALITY CONTROL

## Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232856 - SW-846 3510C										
Blank (B232856-BLK1)										
Prepared: 06/09/19 Analyzed: 06/11/19										
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	1.81		µg/L	2.00		90.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.67		µg/L	2.00		83.7	30-150			
Surrogate: Tetrachloro-m-xylene	1.62		µg/L	2.00		80.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.50		µg/L	2.00		74.9	30-150			
LCS (B232856-BS1)										
Prepared: 06/09/19 Analyzed: 06/11/19										
Aroclor-1016	0.50	0.20	µg/L	0.500		99.5	40-140			
Aroclor-1016 [2C]	0.50	0.20	µg/L	0.500		100	40-140			
Aroclor-1260	0.46	0.20	µg/L	0.500		91.4	40-140			
Aroclor-1260 [2C]	0.48	0.20	µg/L	0.500		96.3	40-140			
Surrogate: Decachlorobiphenyl	1.94		µg/L	2.00		97.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.80		µg/L	2.00		90.1	30-150			
Surrogate: Tetrachloro-m-xylene	1.80		µg/L	2.00		89.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.65		µg/L	2.00		82.3	30-150			
LCS Dup (B232856-BS1)										
Prepared: 06/09/19 Analyzed: 06/11/19										
Aroclor-1016	0.50	0.20	µg/L	0.500		101	40-140	1.34	20	
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		103	40-140	2.43	20	
Aroclor-1260	0.46	0.20	µg/L	0.500		92.3	40-140	0.908	20	
Aroclor-1260 [2C]	0.48	0.20	µg/L	0.500		96.1	40-140	0.191	20	
Surrogate: Decachlorobiphenyl	1.97		µg/L	2.00		98.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.85		µg/L	2.00		92.4	30-150			
Surrogate: Tetrachloro-m-xylene	1.84		µg/L	2.00		92.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.69		µg/L	2.00		84.5	30-150			

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## QUALITY CONTROL

## Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Batch B232959 - SW-846 3510C

## Blank (B232959-BLK1)

Prepared: 06/10/19 Analyzed: 06/13/19

2,4-D	ND	0.50	µg/L							
2,4-D [2C]	ND	0.50	µg/L							
2,4-DB	ND	0.50	µg/L							
2,4-DB [2C]	ND	0.50	µg/L							
2,4,5-TP (Silvex)	ND	0.050	µg/L							
2,4,5-TP (Silvex) [2C]	ND	0.050	µg/L							
2,4,5-T	ND	0.10	µg/L							
2,4,5-T [2C]	ND	0.10	µg/L							
Dalapon	ND	1.2	µg/L							
Dalapon [2C]	ND	1.2	µg/L							
Dicamba	ND	0.050	µg/L							
Dicamba [2C]	ND	0.050	µg/L							
Dichloroprop	ND	0.50	µg/L							
Dichloroprop [2C]	ND	0.50	µg/L							
Dinoseb	ND	0.25	µg/L							
Dinoseb [2C]	ND	0.25	µg/L							
MCPA	ND	50	µg/L							
MCPA [2C]	ND	50	µg/L							
MCPP	ND	50	µg/L							
MCPP [2C]	ND	50	µg/L							
Surrogate: 2,4-Dichlorophenylacetic acid	1.64		µg/L	2.00		82.1	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	1.68		µg/L	2.00		84.2	30-150			

## LCS (B232959-BS1)

Prepared: 06/10/19 Analyzed: 06/13/19

2,4-D	2.04	0.50	µg/L	2.50		81.6	40-140			
2,4-D [2C]	2.16	0.50	µg/L	2.50		86.2	40-140			
2,4-DB	2.09	0.50	µg/L	2.50		83.6	40-140			
2,4-DB [2C]	2.17	0.50	µg/L	2.50		86.7	40-140			
2,4,5-TP (Silvex)	0.223	0.050	µg/L	0.250		89.1	40-140			
2,4,5-TP (Silvex) [2C]	0.215	0.050	µg/L	0.250		86.0	40-140			
2,4,5-T	0.228	0.10	µg/L	0.250		91.3	40-140			
2,4,5-T [2C]	0.232	0.10	µg/L	0.250		92.9	40-140			
Dalapon	4.05	1.2	µg/L	6.25		64.9	40-140			
Dalapon [2C]	4.06	1.2	µg/L	6.25		65.0	40-140			
Dicamba	0.301	0.050	µg/L	0.250		121	40-140			
Dicamba [2C]	0.208	0.050	µg/L	0.250		83.2	40-140			
Dichloroprop	2.17	0.50	µg/L	2.50		86.7	40-140			
Dichloroprop [2C]	2.20	0.50	µg/L	2.50		88.1	40-140			
Dinoseb	0.943	0.25	µg/L	1.25		75.4	10-140			
Dinoseb [2C]	0.940	0.25	µg/L	1.25		75.2	10-140			
MCPA	188	50	µg/L	250		75.3	40-140			
MCPA [2C]	200	50	µg/L	250		79.8	40-140			
MCPP	204	50	µg/L	250		81.8	40-140			
MCPP [2C]	203	50	µg/L	250		81.2	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	1.74		µg/L	2.00		87.0	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	1.75		µg/L	2.00		87.3	30-150			



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## QUALITY CONTROL

## Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232959 - SW-846 3510C										
LCS Dup (B232959-BSD1)										
Prepared: 06/10/19 Analyzed: 06/13/19										
2,4-D	2.08	0.50	µg/L	2.50		83.3	40-140	2.13	20	
2,4-D [2C]	2.20	0.50	µg/L	2.50		87.9	40-140	1.93	20	
2,4-DB	2.16	0.50	µg/L	2.50		86.2	40-140	3.06	20	
2,4-DB [2C]	2.34	0.50	µg/L	2.50		93.5	40-140	7.47	20	
2,4,5-TP (Silvex)	0.224	0.050	µg/L	0.250		89.5	40-140	0.520	20	
2,4,5-TP (Silvex) [2C]	0.220	0.050	µg/L	0.250		88.1	40-140	2.39	20	
2,4,5-T	0.202	0.10	µg/L	0.250		81.0	40-140	12.0	20	
2,4,5-T [2C]	0.223	0.10	µg/L	0.250		89.1	40-140	4.22	20	
Dalapon	4.00	1.2	µg/L	6.25		64.0	40-140	1.33	20	
Dalapon [2C]	4.03	1.2	µg/L	6.25		64.4	40-140	0.904	20	
Dicamba	0.334	0.050	µg/L	0.250		134	40-140	10.3	20	
Dicamba [2C]	0.213	0.050	µg/L	0.250		85.2	40-140	2.38	20	
Dichloroprop	2.22	0.50	µg/L	2.50		88.7	40-140	2.28	20	
Dichloroprop [2C]	2.26	0.50	µg/L	2.50		90.4	40-140	2.52	20	
Dinoseb	0.931	0.25	µg/L	1.25		74.5	10-140	1.25	20	
Dinoseb [2C]	0.947	0.25	µg/L	1.25		75.8	10-140	0.688	20	
MCPA	196	50	µg/L	250		78.5	40-140	4.09	20	
MCPA [2C]	203	50	µg/L	250		81.4	40-140	1.97	20	
MCPA	216	50	µg/L	250		86.3	40-140	5.40	20	
CPP [2C]	206	50	µg/L	250		82.2	40-140	1.23	20	
Surrogate: 2,4-Dichlorophenylacetic acid	1.80		µg/L	2.00		90.1	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	1.78		µg/L	2.00		89.2	30-150			

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232960 - SW-846 3510C										
Blank (B232960-BLK1)										
Prepared: 06/11/19 Analyzed: 06/12/19										
C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
n-Decane	ND	2.0	µg/L							
n-Docosane	ND	2.0	µg/L							
n-Dodecane	ND	2.0	µg/L							
n-Eicosane	ND	2.0	µg/L							
n-Hexacosane	ND	2.0	µg/L							
n-Hexadecane	ND	2.0	µg/L							
Hexatriacontane	ND	2.0	µg/L							
n-Nonadecane	ND	2.0	µg/L							
n-Nonane	ND	2.0	µg/L							
n-Octacosane	ND	2.0	µg/L							
n-Octadecane	ND	2.0	µg/L							
n-Tetracosane	ND	2.0	µg/L							
n-Tetradecane	ND	2.0	µg/L							
n-Triacontane	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	72.8		µg/L	100		72.8	40-140			
Surrogate: o-Terphenyl (OTP)	78.4		µg/L	100		78.4	40-140			
Surrogate: 2-Bromonaphthalene	112		µg/L	100		112	40-140			
Surrogate: 2-Fluorobiphenyl	122		µg/L	100		122	40-140			
LCS (B232960-BS1)										
Prepared: 06/11/19 Analyzed: 06/12/19										
C9-C18 Aliphatics	491	100	µg/L	600		81.8	0-200			
C19-C36 Aliphatics	603	100	µg/L	800		75.4	0-200			
Unadjusted C11-C22 Aromatics	1280	100	µg/L	1700		75.0	0-200			
Acenaphthene	76.3	2.0	µg/L	100		76.3	40-140			
Acenaphthylene	69.6	2.0	µg/L	100		69.6	40-140			
Anthracene	75.7	2.0	µg/L	100		75.7	40-140			
Benzo(g,h,i)perylene	69.6	2.0	µg/L	100		69.6	40-140			
Fluoranthene	77.3	2.0	µg/L	100		77.3	40-140			
Fluorene	73.3	2.0	µg/L	100		73.3	40-140			
2-Methylnaphthalene	64.9	2.0	µg/L	100		64.9	40-140			
Naphthalene	66.8	2.0	µg/L	100		66.8	40-140			
Phenanthrene	75.5	2.0	µg/L	100		75.5	40-140			
Pyrene	78.2	2.0	µg/L	100		78.2	40-140			
n-Decane	50.1	2.0	µg/L	100		50.1	40-140			
n-Docosane	79.1	2.0	µg/L	100		79.1	40-140			
n-Dodecane	59.7	2.0	µg/L	100		59.7	40-140			

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Notes
Batch B232960 - SW-846 3510C									
LCS (B232960-BS1)									
Prepared: 06/11/19 Analyzed: 06/12/19									
n-Eicosane	74.2	2.0	µg/L	100		74.2	40-140		
n-Hexacosane	79.1	2.0	µg/L	100		79.1	40-140		
n-Hexadecane	73.9	2.0	µg/L	100		73.9	40-140		
n-Hexatriacontane	77.4	2.0	µg/L	100		77.4	40-140		
n-Nonadecane	74.8	2.0	µg/L	100		74.8	40-140		
n-Nonane	40.5	2.0	µg/L	100		40.5	30-140		
n-Octacosane	77.2	2.0	µg/L	100		77.2	40-140		
n-Octadecane	75.3	2.0	µg/L	100		75.3	40-140		
n-Tetracosane	79.1	2.0	µg/L	100		79.1	40-140		
n-Tetradecane	68.3	2.0	µg/L	100		68.3	40-140		
n-Triacontane	76.6	2.0	µg/L	100		76.6	40-140		
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5		
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5		
Surrogate: Chlorooctadecane (COD)	74.8		µg/L	100		74.8	40-140		
Surrogate: o-Terphenyl (OTP)	77.0		µg/L	100		77.0	40-140		
Surrogate: 2-Bromonaphthalene	103		µg/L	100		103	40-140		
Surrogate: 2-Fluorobiphenyl	120		µg/L	100		120	40-140		
LCS Dup (B232960-BSD1)									
Prepared: 06/11/19 Analyzed: 06/12/19									
>C18 Aliphatics	494	100	µg/L	600		82.3	0-200	0.629	
C19-C36 Aliphatics	570	100	µg/L	800		71.2	0-200	5.70	
Unadjusted C11-C22 Aromatics	1290	100	µg/L	1700		76.0	0-200	1.25	
Acenaphthene	78.3	2.0	µg/L	100		78.3	40-140	2.51	25
Acenaphthylene	71.7	2.0	µg/L	100		71.7	40-140	2.96	25
Anthracene	77.4	2.0	µg/L	100		77.4	40-140	2.24	25
Benzo(g,h,i)perylene	68.9	2.0	µg/L	100		68.9	40-140	1.08	25
Fluoranthene	78.4	2.0	µg/L	100		78.4	40-140	1.51	25
Fluorene	75.1	2.0	µg/L	100		75.1	40-140	2.41	25
2-Methylnaphthalene	68.1	2.0	µg/L	100		68.1	40-140	4.91	25
Naphthalene	71.6	2.0	µg/L	100		71.6	40-140	6.80	25
Phenanthrene	77.2	2.0	µg/L	100		77.2	40-140	2.16	25
Pyrene	79.3	2.0	µg/L	100		79.3	40-140	1.47	25
n-Decane	58.6	2.0	µg/L	100		58.6	40-140	15.6	25
n-Docosane	73.8	2.0	µg/L	100		73.8	40-140	6.88	25
n-Dodecane	65.4	2.0	µg/L	100		65.4	40-140	9.22	25
n-Eicosane	69.5	2.0	µg/L	100		69.5	40-140	6.57	25
n-Hexacosane	74.2	2.0	µg/L	100		74.2	40-140	6.33	25
n-Hexadecane	70.9	2.0	µg/L	100		70.9	40-140	4.13	25
n-Hexatriacontane	72.5	2.0	µg/L	100		72.5	40-140	6.58	25
n-Nonadecane	70.1	2.0	µg/L	100		70.1	40-140	6.58	25
n-Nonane	50.5	2.0	µg/L	100		50.5	30-140	21.8	25
n-Octacosane	71.9	2.0	µg/L	100		71.9	40-140	7.13	25
n-Octadecane	70.8	2.0	µg/L	100		70.8	40-140	6.24	25
n-Tetracosane	73.7	2.0	µg/L	100		73.7	40-140	7.11	25
n-Tetradecane	68.7	2.0	µg/L	100		68.7	40-140	0.561	25
n-Triacontane	71.8	2.0	µg/L	100		71.8	40-140	6.42	25
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5		
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5		
Surrogate: Chlorooctadecane (COD)	68.2		µg/L	100		68.2	40-140		
Surrogate: o-Terphenyl (OTP)	78.9		µg/L	100		78.9	40-140		
Surrogate: 2-Bromonaphthalene	108		µg/L	100		108	40-140		
Surrogate: 2-Fluorobiphenyl	124		µg/L	100		124	40-140		

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233005 - MA VPH										
Blank (B233005-BLK1)										
Prepared & Analyzed: 06/11/19										
Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Butylcyclohexane	ND	1.0	µg/L							
Decane	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
2-Methylpentane	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Nonane	ND	1.0	µg/L							
Pentane	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
2,2,4-Trimethylpentane	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	47.9		µg/L	40.0		120	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	47.3		µg/L	40.0		118	70-130			
LCS (B233005-BS1)										
Prepared & Analyzed: 06/11/19										
Benzene	47.8	1.0	µg/L	50.0		95.5	70-130			
Butylcyclohexane	58.6	1.0	µg/L	50.0		117	70-130			
Decane	48.3	1.0	µg/L	50.0		96.6	70-130			
Ethylbenzene	47.7	1.0	µg/L	50.0		95.3	70-130			
Methyl tert-Butyl Ether (MTBE)	44.5	1.0	µg/L	50.0		89.0	70-130			
2-Methylpentane	52.5	1.0	µg/L	50.0		105	70-130			
Naphthalene	46.3	5.0	µg/L	50.0		92.5	70-130			
Nonane	56.2	1.0	µg/L	50.0		112	30-130			
Pentane	49.6	1.0	µg/L	50.0		99.1	70-130			
Toluene	47.6	1.0	µg/L	50.0		95.1	70-130			
1,2,4-Trimethylbenzene	47.7	1.0	µg/L	50.0		95.3	70-130			
2,2,4-Trimethylpentane	47.8	1.0	µg/L	50.0		95.5	70-130			
m+p Xylene	96.7	2.0	µg/L	100		96.7	70-130			
o-Xylene	48.0	1.0	µg/L	50.0		96.1	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	46.7		µg/L	40.0		117	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	45.3		µg/L	40.0		113	70-130			
LCS Dup (B233005-BS1)										
Prepared & Analyzed: 06/11/19										
Benzene	46.1	1.0	µg/L	50.0		92.3	70-130	3.49	25	
Butylcyclohexane	56.2	1.0	µg/L	50.0		112	70-130	4.04	25	
Decane	45.7	1.0	µg/L	50.0		91.5	70-130	5.44	25	
Ethylbenzene	46.3	1.0	µg/L	50.0		92.5	70-130	2.98	25	
Methyl tert-Butyl Ether (MTBE)	42.9	1.0	µg/L	50.0		85.8	70-130	3.63	25	
2-Methylpentane	50.1	1.0	µg/L	50.0		100	70-130	4.62	25	
Naphthalene	44.2	5.0	µg/L	50.0		88.4	70-130	4.53	25	
Nonane	54.6	1.0	µg/L	50.0		109	30-130	2.96	25	
Pentane	47.1	1.0	µg/L	50.0		94.2	70-130	5.10	25	
Toluene	46.1	1.0	µg/L	50.0		92.2	70-130	3.14	25	
1,2,4-Trimethylbenzene	46.0	1.0	µg/L	50.0		92.0	70-130	3.51	25	

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## QUALITY CONTROL

## Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B233005 - MA VPH</b>										
<b>LCS Dup (B233005-BSD1)</b>				Prepared & Analyzed: 06/11/19						
2,2,4-Trimethylpentane	45.8	1.0	µg/L	50.0		91.5	70-130	4.26	25	
m+p Xylene	93.3	2.0	µg/L	100		93.3	70-130	3.52	25	
o-Xylene	46.4	1.0	µg/L	50.0		92.9	70-130	3.37	25	
Surrogate: 2,5-Dibromotoluene (FID)	37.9		µg/L	40.0		94.8	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	37.6		µg/L	40.0		94.0	70-130			

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### QUALITY CONTROL

#### Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233013 - SW-846 3005A Dissolved										
Blank (B233013-BLK1)										
Prepared: 06/11/19 Analyzed: 06/13/19										
Antimony	ND	1.0	µg/L							
Arsenic	ND	0.80	µg/L							
Barium	ND	10	µg/L							
Beryllium	ND	0.40	µg/L							
Cadmium	ND	0.20	µg/L							
Chromium	ND	1.0	µg/L							
Lead	ND	0.50	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.20	µg/L							
Thallium	ND	0.20	µg/L							
Vanadium	ND	5.0	µg/L							
Zinc	ND	10	µg/L							
LCS (B233013-BS1)										
Prepared: 06/11/19 Analyzed: 06/13/19										
Antimony	531	10	µg/L	500		106	80-120			
Arsenic	524	8.0	µg/L	500		105	80-120			
Barium	514	100	µg/L	500		103	80-120			
Beryllium	464	4.0	µg/L	500		92.9	80-120			
Cadmium	530	2.0	µg/L	500		106	80-120			
Chromium	517	10	µg/L	500		103	80-120			
Lead	529	5.0	µg/L	500		106	80-120			
Nickel	521	50	µg/L	500		104	80-120			
Selenium	522	50	µg/L	500		104	80-120			
Silver	521	2.0	µg/L	500		104	80-120			
Thallium	503	2.0	µg/L	500		101	80-120			
Vanadium	513	50	µg/L	500		103	80-120			
Zinc	1050	100	µg/L	1000		105	80-120			
LCS Dup (B233013-BSD1)										
Prepared: 06/11/19 Analyzed: 06/13/19										
Antimony	528	10	µg/L	500		106	80-120	0.548	20	
Arsenic	531	8.0	µg/L	500		106	80-120	1.50	20	
Barium	510	100	µg/L	500		102	80-120	0.733	20	
Beryllium	465	4.0	µg/L	500		92.9	80-120	0.0536	20	
Cadmium	524	2.0	µg/L	500		105	80-120	1.24	20	
Chromium	528	10	µg/L	500		106	80-120	2.20	20	
Lead	529	5.0	µg/L	500		106	80-120	0.0635	20	
Nickel	523	50	µg/L	500		105	80-120	0.511	20	
Selenium	528	50	µg/L	500		106	80-120	1.20	20	
Silver	520	2.0	µg/L	500		104	80-120	0.131	20	
Thallium	505	2.0	µg/L	500		101	80-120	0.486	20	
Vanadium	517	50	µg/L	500		103	80-120	0.722	20	
Zinc	1060	100	µg/L	1000		106	80-120	0.810	20	

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## QUALITY CONTROL

## Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233013 - SW-846 3005A Dissolved										
Duplicate (B233013-DUP1)										
Source: 19F0402-01				Prepared: 06/11/19 Analyzed: 06/13/19						
Antimony	ND	1.0	µg/L		ND			NC	20	
Arsenic	ND	0.80	µg/L		ND			NC	20	
Barium	26.3	10	µg/L		25.9			1.86	20	
Beryllium	ND	0.40	µg/L		ND			NC	20	
Cadmium	ND	0.20	µg/L		ND			NC	20	
Chromium	7.32	1.0	µg/L		7.00			4.43	20	
Lead	3.37	0.50	µg/L		3.27			3.08	20	
Nickel	ND	5.0	µg/L		ND			NC	20	
Selenium	ND	5.0	µg/L		ND			NC	20	
Silver	ND	0.20	µg/L		ND			NC	20	
Thallium	ND	0.20	µg/L		ND			NC	20	
Vanadium	6.36	5.0	µg/L		5.74			10.2	20	
Zinc	13.8	10	µg/L		15.3			10.3	20	
Matrix Spike (B233013-MS1)										
Source: 19F0402-01				Prepared: 06/11/19 Analyzed: 06/13/19						
Antimony	513	10	µg/L	500	ND	103	75-125			
Arsenic	528	8.0	µg/L	500	ND	106	75-125			
Barium	536	100	µg/L	500	25.9	102	75-125			
Beryllium	528	4.0	µg/L	500	ND	106	75-125			
Cadmium	516	2.0	µg/L	500	ND	103	75-125			
Chromium	534	10	µg/L	500	7.00	105	75-125			
Lead	534	5.0	µg/L	500	3.27	106	75-125			
Nickel	540	50	µg/L	500	ND	108	75-125			
Selenium	527	50	µg/L	500	ND	105	75-125			
Silver	479	2.0	µg/L	500	ND	95.8	75-125			
Thallium	507	2.0	µg/L	500	ND	101	75-125			
Vanadium	526	50	µg/L	500	ND	105	75-125			
Zinc	1080	100	µg/L	1000	ND	108	75-125			
Batch B233055 - SW-846 7470A Dissolved										
Blank (B233055-BLK1)										
				Prepared: 06/11/19 Analyzed: 06/12/19						
Mercury	ND	0.00010	mg/L							
LCS (B233055-BS1)										
				Prepared: 06/11/19 Analyzed: 06/12/19						
Mercury	0.00376	0.00010	mg/L	0.00400	94.1		80-120			
LCS Dup (B233055-BSD1)										
				Prepared: 06/11/19 Analyzed: 06/12/19						
Mercury	0.00372	0.00010	mg/L	0.00400	93.0		80-120	1.16	20	

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## BREAKDOWN REPORT

Lab Sample ID: S037025-PEM1 Analyzed: 06/11/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.52
Endrin [1]	1.66

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	0.59
Endrin [2]	1.86

## BREAKDOWN REPORT

Lab Sample ID: S037025-PEM2 Analyzed: 06/12/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.67
Endrin [1]	2.18

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	0.69
Endrin [2]	2.30

## BREAKDOWN REPORT

Lab Sample ID: S037025-PEM3 Analyzed: 06/12/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.81
Endrin [1]	2.76



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Lab Sample ID: S037025-PEM3 Analyzed: 06/12/2019

---

Column Number: 2

---

Analyte	% Breakdown
4,4'-DDT [2]	0.86
Endrin [2]	2.99

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

GP-7.MW

Lab Sample ID: 19F0402-03 Date(s) Analyzed: 06/11/2019 06/12/2019  
Instrument ID (1): ECD6A Instrument ID (2): ECD6B  
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDT	1	7.520	0.000	0.000	0.052	
	2	7.563	0.000	0.000	0.057	9.2
alpha-BHC	1	5.482	0.000	0.000	5.2	
	2	5.417	0.000	0.000	5.2	0.0
beta-BHC	1	5.739	0.000	0.000	2.0	
	2	5.688	0.000	0.000	1.7	16.2
Chlordane	1	0.000	0.000	0.000	2.4	
	2	0.000	0.000	0.000	3.2	28.6
delta-BHC	1	5.856	0.000	0.000	13	
	2	5.877	0.000	0.000	14	7.4
Dieldrin	1	7.082	0.000	0.000	0.18	
	2	6.998	0.000	0.000	0.19	5.4
gamma-BHC (Lindane)	1	5.684	0.000	0.000	0.36	
	2	5.635	0.000	0.000	0.36	0.0
Heptachlor Epoxide	1	6.620	0.000	0.000	0.15	
	2	6.519	0.000	0.000	0.27	57.1

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B232856-BS1

Date(s) Analyzed: 06/11/2019 06/11/2019

Instrument ID (1): ECD1

Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.50	
	2	0.000	0.000	0.000	0.50	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.46	
	2	0.000	0.000	0.000	0.48	4.3

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES *SW-846 8082A*

LCS\_Dup

Lab Sample ID: B232856-BSD1 Date(s) Analyzed: 06/11/2019 06/11/2019  
Instrument ID (1): ECD1 Instrument ID (2): ECD1  
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.50	
	2	0.000	0.000	0.000	0.51	2.0
Aroclor-1260	1	0.000	0.000	0.000	0.46	
	2	0.000	0.000	0.000	0.48	4.3

# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B232858-BS1 Date(s) Analyzed: 06/12/2019 06/12/2019

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.305	0.000	0.000	0.93	
	2	7.323	0.000	0.000	0.96	3.2
4,4'-DDE	1	6.862	0.000	0.000	0.95	
	2	6.888	0.000	0.000	0.94	1.1
4,4'-DDT	1	7.519	0.000	0.000	0.95	
	2	7.563	0.000	0.000	0.91	5.4
Aldrin	1	6.199	0.000	0.000	0.91	
	2	6.127	0.000	0.000	0.90	1.1
alpha-BHC	1	5.481	0.000	0.000	0.91	
	2	5.417	0.000	0.000	0.91	0.0
beta-BHC	1	5.738	0.000	0.000	0.88	
	2	5.689	0.000	0.000	0.85	3.5
delta-BHC	1	5.855	0.000	0.000	0.63	
	2	5.876	0.000	0.000	0.67	6.2
Dieldrin	1	7.081	0.000	0.000	0.93	
	2	7.000	0.000	0.000	0.92	1.1
Endosulfan I	1	6.905	0.000	0.000	0.85	
	2	6.799	0.000	0.000	0.87	2.3
Endosulfan II	1	7.423	0.000	0.000	0.80	
	2	7.388	0.000	0.000	0.79	1.3
Endosulfan Sulfate	1	8.071	0.000	0.000	0.93	
	2	7.867	0.000	0.000	0.91	2.2
Endrin	1	7.255	0.000	0.000	0.94	
	2	7.226	0.000	0.000	0.91	3.2
Endrin Ketone	1	8.260	0.000	0.000	0.90	
	2	8.242	0.000	0.000	0.95	5.4
gamma-BHC (Lindane)	1	5.683	0.000	0.000	0.91	
	2	5.635	0.000	0.000	0.92	1.1
Heptachlor	1	5.995	0.000	0.000	0.68	
	2	5.914	0.000	0.000	0.91	28.9
Heptachlor Epoxide	1	6.621	0.000	0.000	0.89	

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES *SW-846 8081B*

LCS

Lab Sample ID: B232858-BS1 Date(s) Analyzed: 06/12/2019 06/12/2019  
Instrument ID (1): ECD6 Instrument ID (2): ECD6  
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	6.521	0.000	0.000	0.87	2.3
Hexachlorobenzene	1	5.374	0.000	0.000	1.0	
	2	5.330	0.000	0.000	0.91	9.4
Methoxychlor	1	7.900	0.000	0.000	0.90	
	2	8.098	0.000	0.000	0.90	0.0

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B232858-BSD1

Date(s) Analyzed: 06/12/2019 06/12/2019

Instrument ID (1): ECD6

Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.306	0.000	0.000	0.95	
	2	7.323	0.000	0.000	0.96	1.1
4,4'-DDE	1	6.862	0.000	0.000	0.96	
	2	6.890	0.000	0.000	0.95	1.1
4,4'-DDT	1	7.519	0.000	0.000	0.97	
	2	7.564	0.000	0.000	0.92	5.3
Aldrin	1	6.200	0.000	0.000	0.93	
	2	6.128	0.000	0.000	0.90	3.3
alpha-BHC	1	5.483	0.000	0.000	0.92	
	2	5.417	0.000	0.000	0.90	2.2
beta-BHC	1	5.739	0.000	0.000	0.87	
	2	5.690	0.000	0.000	0.81	7.1
delta-BHC	1	5.856	0.000	0.000	0.49	
	2	5.876	0.000	0.000	0.51	4.0
Dieldrin	1	7.082	0.000	0.000	0.94	
	2	7.001	0.000	0.000	0.92	2.2
Endosulfan I	1	6.906	0.000	0.000	0.83	
	2	6.800	0.000	0.000	0.83	0.0
Endosulfan II	1	7.424	0.000	0.000	0.79	
	2	7.389	0.000	0.000	0.77	2.6
Endosulfan Sulfate	1	8.072	0.000	0.000	0.94	
	2	7.867	0.000	0.000	0.91	3.2
Endrin	1	7.255	0.000	0.000	0.95	
	2	7.227	0.000	0.000	0.91	4.3
Endrin Ketone	1	8.260	0.000	0.000	0.92	
	2	8.243	0.000	0.000	1.0	8.3
gamma-BHC (Lindane)	1	5.684	0.000	0.000	0.92	
	2	5.636	0.000	0.000	0.89	3.3
Heptachlor	1	5.996	0.000	0.000	0.70	
	2	5.915	0.000	0.000	0.90	25.0
Heptachlor Epoxide	1	6.622	0.000	0.000	0.91	

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B232858-BSD1 Date(s) Analyzed: 06/12/2019 06/12/2019  
Instrument ID (1): ECD6 Instrument ID (2): ECD6  
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	6.522	0.000	0.000	0.87	4.5
Hexachlorobenzene	1	5.376	0.000	0.000	1.0	
	2	5.331	0.000	0.000	0.91	9.4
Methoxychlor	1	7.900	0.000	0.000	0.91	
	2	8.098	0.000	0.000	0.91	1.1



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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES *SW-846 8151A*

LCS

Lab Sample ID: B232959-BS1 Date(s) Analyzed: 06/13/2019 06/13/2019  
Instrument ID (1): ECD 8 Instrument ID (2): ECD 8  
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	13.813	0.000	0.000	0.228	
	2	13.926	0.000	0.000	0.232	0.9
2,4,5-TP (Silvex)	1	13.236	0.000	0.000	0.223	
	2	13.131	0.000	0.000	0.215	2.3
2,4-D	1	11.562	0.000	0.000	2.04	
	2	11.535	0.000	0.000	2.16	7.7
2,4-DB	1	14.946	0.000	0.000	2.09	
	2	14.993	0.000	0.000	2.17	3.3
Dalapon	1	3.730	0.000	0.000	4.05	
	2	3.397	0.000	0.000	4.06	1.0
Dicamba	1	9.704	0.000	0.000	0.301	
	2	9.582	0.000	0.000	0.208	36.2
Dichloroprop	1	11.109	0.000	0.000	2.17	
	2	10.927	0.000	0.000	2.20	0.0
Dinoseb	1	16.825	0.000	0.000	0.943	
	2	15.576	0.000	0.000	0.940	0.0
MCPA	1	10.431	0.000	0.000	188	
	2	10.324	0.000	0.000	200	5.1
MCPP	1	10.146	0.000	0.000	204	
	2	9.895	0.000	0.000	203	1.5

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# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS\_Dup

Lab Sample ID: B232959-BSD1 Date(s) Analyzed: 06/13/2019 06/13/2019

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	13.815	0.000	0.000	0.202	
	2	13.926	0.000	0.000	0.223	10.9
2,4,5-TP (Silvex)	1	13.235	0.000	0.000	0.224	
	2	13.132	0.000	0.000	0.220	0.0
2,4-D	1	11.562	0.000	0.000	2.08	
	2	11.535	0.000	0.000	2.20	4.7
2,4-DB	1	14.947	0.000	0.000	2.16	
	2	14.993	0.000	0.000	2.34	6.2
Dalapon	1	3.731	0.000	0.000	4.00	
	2	3.398	0.000	0.000	4.03	0.7
Dicamba	1	9.705	0.000	0.000	0.334	
	2	9.581	0.000	0.000	0.213	43.1
Dichloroprop	1	11.110	0.000	0.000	2.22	
	2	10.927	0.000	0.000	2.26	2.7
Dinoseb	1	16.826	0.000	0.000	0.931	
	2	15.577	0.000	0.000	0.947	1.8
MCPA	1	10.431	0.000	0.000	196	
	2	10.326	0.000	0.000	203	1.5
MCPP	1	10.147	0.000	0.000	216	
	2	9.896	0.000	0.000	206	6.6

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## FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
P-02	Sample RPD between primary and confirmatory analysis exceeded 40%. Per EPA method 8000, the lower value was reported due to obvious chromatographic interference on the column with the higher result.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-07	Elevated reporting limit based on lowest point in calibration.
	MA CAM reporting limit not met.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<b>MADEP-EPH-04-1.1 in Soil</b>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<b>MADEP-EPH-04-1.1 in Water</b>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<b>MADEP-VPH-Feb 2018 Rev 2.1 in Water</b>	
Unadjusted C5-C8 Aliphatics	CT,NC,ME,NH-P
C5-C8 Aliphatics	CT,NC,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C10 Aromatics	CT,NC,ME,NH-P
Benzene	CT,NC,ME,NH-P
Ethylbenzene	CT,NC,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,ME,NH-P
Naphthalene	CT,NC,ME,NH-P
Toluene	CT,NC,ME,NH-P
m+p Xylene	CT,NC,ME,NH-P
o-Xylene	CT,NC,ME,NH-P
<b>W-846 6020B in Water</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,NC,ME,VA
Barium	MA,NY,CT,NC,NH,ME,VA

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SIV-846 6020B in Water</i>	
Beryllium	CT,NH,NY,NC,ME,VA
Cadmium	CT,NH,NY,NC,ME,VA
Chromium	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA
Nickel	CT,NH,NY,NC,ME,VA
Selenium	CT,NH,NY,NC,ME,VA
Silver	CT,NC,NH,NY,ME,VA
Thallium	CT,NH,NY,NC,ME,VA
Vanadium	CT,NH,NY,NC,ME,VA
Zinc	CT,NH,NY,NC,ME,VA
<i>SIV-846 7470A in Water</i>	
Mercury	CT,NH,NY,NC,ME,VA
<i>SIV-846 8081B in Water</i>	
Aldrin	CT,NC,NH,NY,ME,VA
Aldrin [2C]	CT,NC,NH,NY,ME,VA
alpha-BHC	CT,NC,NH,NY,ME,VA
alpha-BHC [2C]	CT,NC,NH,NY,ME,VA
beta-BHC	CT,NC,NH,NY,ME,VA
beta-BHC [2C]	CT,NC,NH,NY,ME,VA
delta-BHC	CT,NC,NH,NY,ME,VA
delta-BHC [2C]	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane)	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane) [2C]	CT,NC,NH,NY,ME,VA
Chlordane	CT,NC,NH,NY,ME,VA
Chlordane [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDD	CT,NC,NH,NY,ME,VA
4,4'-DDD [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDE	CT,NC,NH,NY,ME,VA
4,4'-DDE [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDT	CT,NC,NH,NY,ME,VA
4,4'-DDT [2C]	CT,NC,NH,NY,ME,VA
Dieldrin	CT,NC,NH,NY,ME,VA
Dieldrin [2C]	CT,NC,NH,NY,ME,VA
Endosulfan I	CT,NC,NH,NY,ME,VA
Endosulfan I [2C]	CT,NC,NH,NY,ME,VA
Endosulfan II	CT,NC,NH,NY,ME,VA
Endosulfan II [2C]	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate [2C]	CT,NC,NH,NY,ME,VA
Endrin	CT,NC,NH,NY,ME,VA
Endrin [2C]	CT,NC,NH,NY,ME,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NC,NH,NY,ME,VA
Heptachlor [2C]	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide	CT,NC,NH,NY,ME,VA

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## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8081B in Water</i>	
Heptachlor Epoxide [2C]	CT,NC,NH,NY,ME,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NC,NH,NY,ME,VA
Methoxychlor [2C]	CT,NC,NH,NY,ME,VA
<i>SW-846 8082A in Water</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
<i>SW-846 8151A in Water</i>	
2,4-D	ME,NC,NH,CT,NY,VA
2,4-D [2C]	ME,NC,NH,CT,NY,VA
2,4-DB	ME,NC,NH,CT,NY,VA
2,4-DB [2C]	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex)	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex) [2C]	ME,NC,NH,CT,NY,VA
2,4,5-T	ME,NC,NH,CT,NY,VA
2,4,5-T [2C]	ME,NC,NH,CT,NY,VA
Dalapon	ME,NC,NH,CT,NY,VA
Dalapon [2C]	ME,NC,NH,CT,NY,VA
Dicamba	ME,NC,NH,CT,NY,VA
Dicamba [2C]	ME,NC,NH,CT,NY,VA
Dichloroprop	ME,NC,NH,CT,NY,VA
Dichloroprop [2C]	ME,NC,NH,CT,NY,VA
Dinoseb	ME,NC,NH,CT,NY,VA
Dinoseb [2C]	ME,NC,NH,CT,NY,VA
MCPA	NC,CT
MCPA [2C]	NC,CT
MCPP	NC,CT
MCPP [2C]	NC,CT
<i>SW-846 8260C in Water</i>	

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## Certified Analyses included in this Report

## CERTIFICATIONS

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
Acetone	CT,NH,NY,ME
tert-Amyl Methyl Ether (TAME)	NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	NY,ME
sec-Butylbenzene	NY,ME
tert-Butylbenzene	NY,ME
tert-Butyl Ethyl Ether (TBEE)	NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	NY,ME
4-Chlorotoluene	NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NY
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
Diisopropyl Ether (DIPE)	NH,NY,ME
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	CT,NH,NY,ME
Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	NY,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,ME

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## Certified Analyses included in this Report

## CERTIFICATIONS

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NH,NY,ME
1,2,4-Trichlorobenzene	CT,NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME

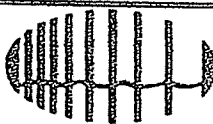
The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2019





I Have Not Confirmed Sample Container  
Numbers With Lab Staff Before Relinquishing  
Over Samples \_\_\_\_\_



**con-test®**  
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False  
Statement will be brought to the attention of the Client - State True or False

Client CDW Consultants

Received By CF

Date 11/7/2019

Time 1745

How were the samples  
received?

In Cooler T

No Cooler \_\_\_\_\_

On Ice T

No Ice \_\_\_\_\_

Direct from Sampling \_\_\_\_\_

Ambient \_\_\_\_\_

Melted Ice \_\_\_\_\_

Were samples within  
Temperature? 2-6°C T

By Gun # 4

Actual Temp - 3.4 + 2.6

By Blank # \_\_\_\_\_

Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? N/A

Were Samples Tampered with? N/A

Was COC Relinquished? T

Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T

Were samples received within holding time? T

Did COC include all

Client T

Analysis T

Sampler Name T

pertinent Information? Project T

Project T

ID's T

Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Who was notified? \_\_\_\_\_

Are there Rushes? F

Who was notified? \_\_\_\_\_

Are there Short Holds? F

Who was notified? \_\_\_\_\_

Is there enough Volume? T

Is there Headspace where applicable? F

MS/MSD? F

Proper Media/Containers Used? T

Is splitting samples required? F

Were trip blanks received? F

On COC? F

Do all samples have the proper pH?

Acid T

Base \_\_\_\_\_

Vials	#	Containers	#		#		#
Unp-		1 Liter Amb.	<u>13</u>	1 Liter Plastic		16 oz Amb.	
HCL-	<u>24</u>	500 mL Amb.		500 mL Plastic	<u>4</u>	8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

#### Unused Media

Vials	#	Containers	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

only 1 unpreserved IL received for GP-5  
only 2 unpreserved IL received for GP-7

## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 19F0402
Project Location: Beaver St., Waltham, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
19F0402-01 thru 19F0402-04.

Matrices: Water

**CAM Protocol (check all that below)**

8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A (X)	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B (X)	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D (X)	MassDEP EPH CAM IV B (X)	8151 Herbicides CAM V C (X)	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.</b>		
<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

**I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.**

Signature: Tod E. Kopyscinski

Position: Laboratory Director

Printed Name: Tod E. Kopyscinski

Date: 06/14/19





CDW CONSULTANTS, INC.  
CIVIL & ENVIRONMENTAL ENGINEERS

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
(ASTM E 1527-13)**

City of Waltham  
240 and 225-227 Beaver Street  
Waltham, Massachusetts 02452

July 2019

Prepared for:

City of Waltham  
119 School Street  
Waltham, Massachusetts 02451

CDW Project #1830.00

1-5  
of  
1497



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- Appendix A: Environmental Database Report Executive Summary
- Appendix B: Historic Aerial Photographs
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## I EXECUTIVE SUMMARY

CDW Consultants, Inc. (CDW) conducted an investigation of the properties located at 240 Beaver Street and 225-227 Beaver Street, in Waltham, Massachusetts (MA) (the "Site") on behalf of the City of Waltham. The Site includes two separate parcels of land totaling 58.7 acres. The Site contains one main 7,474 square foot administration building built in 1948 and two other support buildings and greenhouses. The properties are owned by the Commonwealth of Massachusetts and are listed on the City Assessor database under the following parcel identification numbers: R053 003 0001 and R053 003 0014 (240 Beaver Street) and R054 001 0001 (225-227 Beaver Street). Figure 1 depicts the Site locus. Figures 2 and 3 are Site Plans for 225-227 Beaver Street and 240 Beaver Street, respectively.

The Site investigation was conducted in general conformance with the ASTM International (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E1527-13) and the Massachusetts General Laws (MGL) Part I, Title II, Chapter 21E: Massachusetts Oil and Hazardous Material Release Prevention and Response Act.

On April 30, 2019, CDW personnel performed a Site reconnaissance to conduct a general visual inspection of the Site, observe the interior of the Site building, and document existing and observable uses of the Site and adjacent properties. A User Questionnaire was completed by Mr. Fred Leland, Maintenance for the facility.

The investigation conducted by CDW personnel included a review of available federal, state, and local environmental agency records to identify the presence or likely presence of Recognized Environmental Conditions (RECs), Historical Recognized Environmental Condition (HRECs) and Controlled Recognized Environmental Condition (CRECs).

The following CREC was identified during the assessment:

A CREC was identified on the northern Parcel 2 located at 225-227 Beaver Street where a portion of the parcel is identified as a Massachusetts Waste Disposal Site that has been assigned Release Tracking Number (RTN) 3-28049 for a release of heavy metals. A Class C-1 Response Action Outcome (RAO) was filed with Massachusetts Department of Environmental Protection (MassDEP) in November 2011 stating a condition of No Significant Risk of harm to human health exists for all current uses of the Disposal Site Area (DSA) and that it is infeasible to reach a Permanent Solution. The C1 RAO stated the disposal site boundary must be controlled with a fence. In 2011, a 6-foot tall chain link fence was installed around the DSA. A Periodic Review is conducted every five years. The last Periodic Review was conducted in July 2016 by Ramboll Environ.





The following HRECs were identified during the assessment:

- An HREC was identified on the southern Parcel 1 located at 240 Beaver Street where a portion of the parcel is listed as a Massachusetts Waste Disposal Site that has been assigned Release Tracking Number 3-28048 for a release of oil. A Class B-1 RAO was submitted to MassDEP on October 5, 2009 as assessments of the release have demonstrated that No Significant Risk exists as a result of the release and therefore site closure has been achieved.
- An HREC was identified on the southern Parcel 1 located at 240 Beaver Street where a portion of the parcel is listed as a Massachusetts Waste Disposal Site that has been assigned Release Tracking Number 3-28050 for a release condition of heavy metals in soil. A Class A-1 RAO was submitted to MassDEP on October 11, 2009 after soil remediation was completed, demonstrating that No Significant Risk exists as a result of the release and therefore site closure has been achieved.

Parcel 1 (240 Beaver Street) was the site of an upland fly ash research area, and Parcel 2 (225-227 Beaver Street) was the site of a wetlands fly ash research area. According to the maintenance foreman for Parcel 1, arsenic based pesticides and herbicides had been stored on-site, and used in the past inside the greenhouses.

An asbestos survey was beyond the scope of this assessment. However, it was previously documented in the document entitled, Waltham Experiment Station, Study of Existing Conditions, Development Potential, and Alternative Future Development Options. The section on the Regulated Building Materials Survey (RBMS) identified the following locations contained asbestos containing materials (ACM):

- Countertops and panels in the Parcel 1 Administration Building;
- Inside the laboratory, inside the sink countertops and panels in the Parcel 1 Gray Building;
- In the boiler smokestack in the Parcel 1 Boiler Building;
- In the linoleum floor located inside the Parcel 2 Farm House;
- In the asphalt roof shingles and transite panels within the Parcel 2 Main Barn;
- In the building materials within the Parcel 2 cow barn;
- In the building materials and shingles of Parcel 2 sheds 1 and 2.

No assessment of the potential for asbestos in soil was reviewed or performed as part of this scope or





**DRAFT**

**RELEASE ABATEMENT MEASURE PLAN  
& TSCA PERFORMANCE BASED CLEANUP PLAN  
240 Beaver Street  
Waltham, MA**

**RTNs 3-36027 and 3-36180**

Prepared for

City of Waltham  
119 School Street  
Waltham, MA 02451

Prepared by  
CDW Consultants, Inc.  
4 California Avenue  
Framingham, MA 01701

September 22, 2022

CDW Project No. 1830.20



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## INTRODUCTION

CDW Consultants, Inc. (CDW) has been retained by the City of Waltham to prepare a Release Abatement Measure (RAM) Plan and Toxic Substances Control Act (TSCA) Performance Based Cleanup Plan for the property located at 240 Beaver Street in Waltham, Massachusetts (the "Site"). The RAM addresses the excavation and off-Site disposal of up to 500 cubic yards of soil from an area contaminated with PCBs, TPH, pesticides and heavy metals. The Site was assigned Release Tracking Numbers (RTN) 3-36027 and 3-36180 by the Massachusetts Department of Environmental Protection (MassDEP) in December 2019 and April 2020, respectively. The purpose of this plan is to comply with 310 CMR 40.0440 and 40.1067 of the Massachusetts Contingency Plan (MCP), which allows the implementation of accelerated response actions to reduce risks at certain disposal sites.

### 1.0 RESPONSIBILITY

DCR is the potentially responsible party. The person assuming the responsibility for conducting the RAM is the following:

City of Waltham  
Ms. Jeannette A. McCarthy  
610 Main Street  
Waltham, MA 02451  
(781) 314-3000

The RAM Plan was prepared by the Licensed Site Professional below:

Brian J. Miller, LSP  
CDW Consultants, Inc.  
4 California Avenue  
Framingham, MA 01701  
508-875-2657

### 2.0 SITE CONDITIONS AND HISTORY

The Site consists of an approximate ¼ acre portion of 240 Beaver Street located within a wooded area on the southern portion of the property. The disposal site is visually defined by a clearing in the wooded area, and where fill material was observed. Visual evidence of filling at the disposal Site showed cinder block, concrete, wood, glass, stone and plastic bottles. There was also evidence of historic fill as defined by the MCP. Soil with concentrations of lead, chromium and 4,4-DDT exceeding MCP Reportable Concentrations was found and is associated with MassDEP RTN 3-



36027. A smaller area of PCBs in soil exceeding RCs is also present within the larger area, and is associated with RTN 3-36180. A Site Plan is included as Figure 2.

The Site was recently acquired by the City of Waltham from the Commonwealth of Massachusetts. The property has been occupied by the University of Massachusetts Agriculture Experiment Station since the 1920's. Various tenants currently occupy the property.

### **3.0 PREVIOUS ASSESSMENTS AND RESPONSE ACTIONS BY OTHERS**

#### ***RTN 3-36027***

A Phase I and II assessment was conducted at the Site by CDW in 2019 and 2020. Total chromium and lead were detected above MCP Reporting Category RCS-1 thresholds at boring location GP1-7 at a depth of 10-12 feet. 4,4-DDT was detected above MCP RCS-1 thresholds at a depth of 3-5 feet in GP1-7. Dissolved metals, pesticides and VOCs were detected in groundwater at the Site, but no MCP reporting thresholds were exceeded. This release was reported to MassDEP on December 4, 2019. Additional sampling was conducted in the area of GP1-7 in December 2019 to delineate the extent of contamination. Borings GP4-1 through GP4-9 were advanced and microscopic analysis for coal, coal ash and wood ash was conducted to identify if lead was the result of historic fill observed at the Site. As a result, the impacts of metals and pesticides appeared to be limited to GP1-7. Depth to groundwater ranges from approximately 10.82 to 12.69 feet with a southwesterly flow direction.

A Revised Release Notification Form (RNF) was submitted for this RTN on September 20, 2022, based on the results of soil precharacterization sampling. Concentrations of TPH, 4,4'-DDD, dieldrin, and hexachlorobenzene, which were not previously identified, exceeded applicable Reportable Concentrations for S-1 soil. The concentration of 4,4'-DDT identified was significantly higher than initially detected and, therefore, the RNF was revised with the higher concentration.

#### ***RTN 3-36180***

This release was reported to MassDEP on April 14, 2020, due to the detection of PCBs in soil at location GP4-2 at a depth of 6-8 feet. This boring is located within the disposal site associated with RTN 3-36027. PCBs were detected at a maximum concentration of 66 mg/kg.

### **4.0 RECENT INVESTIGATIONS**

#### ***Soil Precharacterization Testing***

On May 12, 2022, soil samples were collected with a direct push drill rig from depths between 2 and 10 feet to precharacterize soil for off-site disposal. Soil X Corp. was CDW's subcontractor that

performed the drilling. Nine (9) borings (GP3-1 through GP3-9) were completed to depths of 15 feet. The borings were completed in the fill area where soil excavation is anticipated, and soil samples were collected in five-foot increments in disposable plastic sleeves. Soil from the 2-10 foot depth of borings GP3-2, GP3-4, GP3-5, GP3-6, and GP3-8 were collected and composited into a single sample, Comp #1 (2-10ft). Groundwater was encountered at approximately 12 feet below grade during drilling.

Soils observed were brown and black sandy fill soils over gray, native silty fine to medium sand. The top two feet was observed to be brown and tan fill soils. The interval from approximately 2 to 10 feet was observed to be primarily black fin to medium sand with various solid wastes including brick, concrete, ash layers, coal, and some building materials of pasty caulking, glass and metal. A Site Plan showing sampling locations is included as Figure 2. Soil boring logs are included in Appendix A.

Soil samples were field screened for total organic volatiles (TOVs) with a MiniRae Lite® photoionization detector (PID) calibrated to an isobutylene standard. The results of PID screening showed levels of TOVs between 0.0 and 7.8 parts per million by volume (PPMV) in the samples screened. PID screening results are included in Table 1.

The composite sample was submitted to Contest Laboratories for analyses for Total Petroleum Hydrocarbons (TPH), Semi-Volatile Organic Compounds (SVOCs), Polychlorinated Biphenyls (PCBs), MCP14 metals, TCLP lead, pesticides, herbicides, pH, specific conductance, reactivity, and flashpoint. A discrete sample for VOC analysis was obtained from boring GP3-5 from a depth of 4-6 feet, because that sample exhibited the highest TOVs during field screening.

The results of the analyses are included in Table 2. The complete laboratory results are included in Appendix B.

## 5.0 SURROUNDING RECEPTORS

There are approximately 50 full-time workers at the property that the Site is located on. These workers primarily work on other portions of the property, and not specifically within the Site boundaries. Potential future human receptors include children and adults. Camp Cedar Hill, a girl scout camp, is the only institution located in the area, but is located further than 500 feet north of the Site. Based on the 2010 census which lists the population density of Waltham as 4,763.3 people per square mile, the estimated residential population within ½ mile of the Site is approximately 3,739 people.

CDW obtained a Priority Resources Map from MassGIS. According to the map, there are no municipal water supply wells, no Interim Wellhead Protection Areas, Approved Zone II Areas, Sole Source Aquifers, Public Water Supplies, High-yield Potentially Productive Aquifers, Surface Water





Supply Zone A, Public Surface Water Supply Areas, certified or potential vernal pools, Natural Heritage and Endangered Species Program (NHESP) Estimated Habitat of Rare Wildlife, or Areas of Critical Environmental Concern (ACECs) located within one-half mile of the Site. The Site parcel is designated as Protected Open Space identified as "Waltham Agricultural Fields". The nearest surface water body is the Beaver Brook located approximately 150 feet south of the Site. The nearest mapped wetlands are located approximately 300 feet southeast of the Site.

The surrounding area is served by the Massachusetts Water Resource Authority (MWRA) municipal drinking water supply system. Drinking water is obtained from surface water reservoirs located in central and western Massachusetts. No water supply wells are known to be located within 500 feet of the Site.

## **6.0 TSCA APPLICABILITY AND PERFORMANCE BASED PLAN**

PCBs that enter the environment under certain circumstances are required to be managed under the Toxic Substances Control Act (TSCA) and the regulations found at 40 CFR 761. Based on the history of the Site as seen through aerial photographs, the PCBs found in soil were likely placed prior to 1970. TSCA's definition of PCB remediation waste includes "materials disposed of prior to April 18, 1978 that are currently at concentrations greater than 50 ppm regardless of the concentrations of the original spill." The soils at the Site meet this definition, therefore remediation is required to be in accordance with TSCA's regulations for PCB remediation waste.

Regulations for TSCA Performance Based Plans in accordance with 761.61(b) require that the area of concern be characterized sufficiently to delineate the extent of PCBs. While only 3 PCB samples have been analyzed (one composite and 2 grab), the area of fill has been visually defined based on 18 borings. Soil containing PCBs at concentrations equal to or above 1 mg/kg will be excavated and disposed at a TSCA approved facility. After excavation, confirmatory soil sampling will be conducted in accordance with TSCA Subpart O.

## **7.0 REQUIREMENTS FOR RELEASE ABATEMENT MEASURES**

In accordance with 310 CMR 40.0441, Release Abatement Measures are intended to reduce risks at a disposal site and/or increase the cost effectiveness of response actions by allowing the implementation of certain accelerated remedial actions to stabilize, treat, control, minimize, or eliminate releases until such a time as a Permanent or Temporary Solution is achieved as described in 310 CMR 40.1000, or until Comprehensive Remedial Actions can be implemented, as described in 310 CMR 40.0800.



Elevated concentrations of lead, chromium, 4,4-DDT, and PCBs were detected in soil at the Site. To reduce overall Site risk, the provisions of this RAM Plan will guide the management of excavated soil. There currently no plans for development at the Site. It is estimated that approximately 500 cubic yards of soil may be excavated for off-site disposal.

## **8.0 RELEASE ABATEMENT MEASURE - OBJECTIVES**

The overall objective of the RAM is to excavate and dispose of soil with elevated concentrations of metals, pesticides and PCBs. The material is also known to contain a certain amount of concrete, glass, and wood. The specific objectives of the RAM are the following:

- Reduce risk to human health, safety, public welfare, and the environment from potential exposure to metals, pesticides, TPH and PCBs in soil.
- Visually monitor for dust during soil excavation or other soil movement activities.
- Excavate, stockpile, and manage the off-site disposal of up to 500 cubic yards of soil.
- Conduct confirmatory soil sampling for EPH, pesticides, and metals, and PCBs in accordance with TSCA Subpart O.

## **9.0 RELEASE ABATEMENT MEASURE - SPECIFIC PLANS**

This RAM Plan addresses the excavation and off-site disposal of contaminated soil from the areas shown on Figures 2 and 3. The proposed RAM Plan will be conducted in accordance with a site-specific Health and Safety Plan. Managed soil will be handled to minimize excessive movement and to reduce the potential for air emissions. Confirmatory sampling will be conducted to evaluate post remedial risk to human health.

### **9.1 Public Involvement**

Written notifications will be provided to the City of Waltham Mayor's Office and the City of Waltham Health Department providing information on the purpose, nature, and expected duration of the RAM, and any personal protective equipment (PPE) that will be used. A copy of each of these notification letters is attached to this report as Appendix C.

### **9.2 Site Security**

The Site is located in the rear of the property in a relatively isolated wooded area. The Site will be secured with temporary construction fence, which will remain during the duration of the excavation activities. This area will continue to be off limits to the general public during construction activities.



### **9.3 Soil Excavation, Management and Disposal**

The current and proposed RAM soil excavation activities involve Site preparation, soil excavation, stockpiling and loading into trucks or containers for off-site disposal or reuse. Level D PPE will be required for work within the excavation area.

Site preparation includes the clearing and preparation of the staging, excavation and loading areas, along with designated stockpile and staging areas.

The proposed area of excavation is approximately 50 feet by 30 feet by 9 feet deep. An estimated soil volume of up to 500 cubic yards is anticipated to be generated based on assessment and precharacterization soil results.

TCLP lead results did not show any exceedances of criteria that would classify the material as a hazardous waste. Soils slated for offsite disposal will be stockpiled on and covered with 10 mil polyethylene sheeting and restricted from public access within the fenced area. Loading will occur at the area of excavation where soil will be stockpiled and transported through the Site on existing gravel access roads. Because the soil is regulated under the MCP, a MassDEP Bill of Lading will be used to transport the soil to the appropriate facility.

Clean fill will be brought on-site to replace excavated contaminated soils. Equipment used at the Site that comes in contact with contaminated soil will be decontaminated with water and detergent prior to leaving the Site.

### **9.4 Confirmatory Soil Sampling**

After excavation, a sufficient number of confirmatory soil samples will be collected to evaluate the soil excavation. In accordance with Subpart O of TSCA, soil samples will be collected every 1.5 meters in a grid pattern. If feasible, and based on visual inspection after excavation, samples may be composited (5-point composites) and results evaluated to ensure that the allowable standard could not be mathematically exceeded.

### **9.5 Excavation Dewatering**

Depth to groundwater on the property was measured between 10.82 and 12.69 feet below grade. Depth to groundwater in well GP1-7MW located at the Site was measured at 12.69 feet below grade. The excavations are expected to terminate at a maximum depth of approximately 8-10 feet based on existing results. Therefore, dewatering is not anticipated. If required, temporary excavation dewatering will be localized and directed into a nearby excavation.



## **10.0 SCHEDULE**

Soil excavation and management will commence upon submittal of this RAM Plan to MassDEP. The duration of RAM activities including any soil excavation and stockpiling and off-site disposal is estimated to last up to two weeks. The RAM will be considered complete when all remediation waste has been removed from the Site.

If needed, a RAM Status Report will be submitted to MassDEP 120 days after initial submission of the RAM Plan and every six months thereafter, if needed. A RAM Completion Report will be submitted within 60 days of the completion of remedial actions at the Site.

## **11.0 REMEDIATION WASTE**

Remediation waste generated at the Site will consist of soil contaminated with metals, pesticides and PCBs. Up to 500 cubic yards of soil is anticipated to be generated as a result of soil excavation activities. Because the soil will be managed under a Performance Based Cleanup Plan, disposal is limited to off-site disposal as a TSCA waste.

## **12.0 ENVIRONMENTAL MONITORING PLAN**

The following environmental monitoring plan has been implemented and is proposed to be continued at the Site during the course of the proposed RAM:

### **12.1 Excavation Air Monitoring**

Because SVOCs are expected, ambient air will be monitored every 15 minutes during heavy excavation with a PID using an 10.6 eV lamp. If a level of 10 ppmv of total organic vapors is met or exceeded in ambient air for a period of 15 minutes or longer (two consecutive readings), mitigative measures will be taken. These may include a temporary stop in work, or ventilation with fans to control vapors.

### **12.2 Dust Monitoring**

During implementation of this RAM Plan, short-term exposure to contaminated soil could occur primarily through dust generation while performing necessary excavation and materials handling tasks. To mitigate potential exposure by site workers and/or off-site receptors, engineering controls will be implemented to govern any activity that might disturb or expose contaminated soils. Dust suppression will occur throughout excavation activities to minimize potential off-site migration of airborne contaminants.



To mitigate dust emissions, the Construction Contractor will utilize the following specific measures:

- Wetting agents will be used regularly to control and suppress dust that may come from exposed excavations, chipping, sawing, etc.
- Gravel tracking pads and a wheel wash will be provided at the construction entrance.
- Construction practices will be monitored to ensure that unnecessary transfers and mechanical disturbances of loose materials are minimized and that any emissions of dust are minimal.

All soils, when transported upon public roadways, shall be covered to minimize fugitive dust, and where necessary, truck tire and undercarriage washing shall be employed to minimize tracking of soils onto public roadways.

### **13.0 PERMITS & FEES**

Since this RAM Plan is being prepared after Tier Classification for both Disposal Sites, no RAM Plan submittal fee is required. In accordance with 310 CMR 40.0443(2), subsequent to the receipt by MassDEP of a complete RAM Plan, approval is not required from MassDEP to conduct the RAM. The following permits will be obtained from public and private agencies prior to implementation of the RAM Plan:

#### **13.1 Dig-Safe**

Utility clearance was requested from Dig-Safe at least 72 hours prior to initiating the RAM activities. Utility marking were incorporated in the Site Plan to show their locations. Entities that are not subscribers to the Dig-Safe network (such as the local water and sewer department) were contacted directly for utility marking.

#### **13.2 Trench Excavation Permit**

If applicable, based on the size of the excavation, the excavation contractor will obtain a trench permit from the City of Waltham. The permit will be kept on the Site during excavation activities.

### **14.0 GREENER CLEANUPS**

In accordance with 310 CMR 40.0191(3)(e), Response Action Performance Standard (RAPS), the project work will incorporate relevant and feasible opportunities for achieving green remediation goals. These include:

- Minimizing total energy use while maximizing the use of renewable energy;



- Minimizing emissions of greenhouse gases and other air pollutants;
- Minimizing water use and impacts to water resources;
- Reducing, reusing and recycling materials and waste; and
- Avoiding or reducing adverse impacts to ecosystems and land resources.

Soil excavation and off-site disposal was deemed the most feasible remedial alternative. Soil excavation and off-site disposal was limited to only those soils that reduce overall human health risk.

## **FIGURES**



## CDW CONSULTANTS, INC.

240 BEAVER STREET  
WALTHAM, MA

Figure 1 - Site Location Map



SOURCE: MASSGIS

SCALE: 1 inch = 2,000 feet



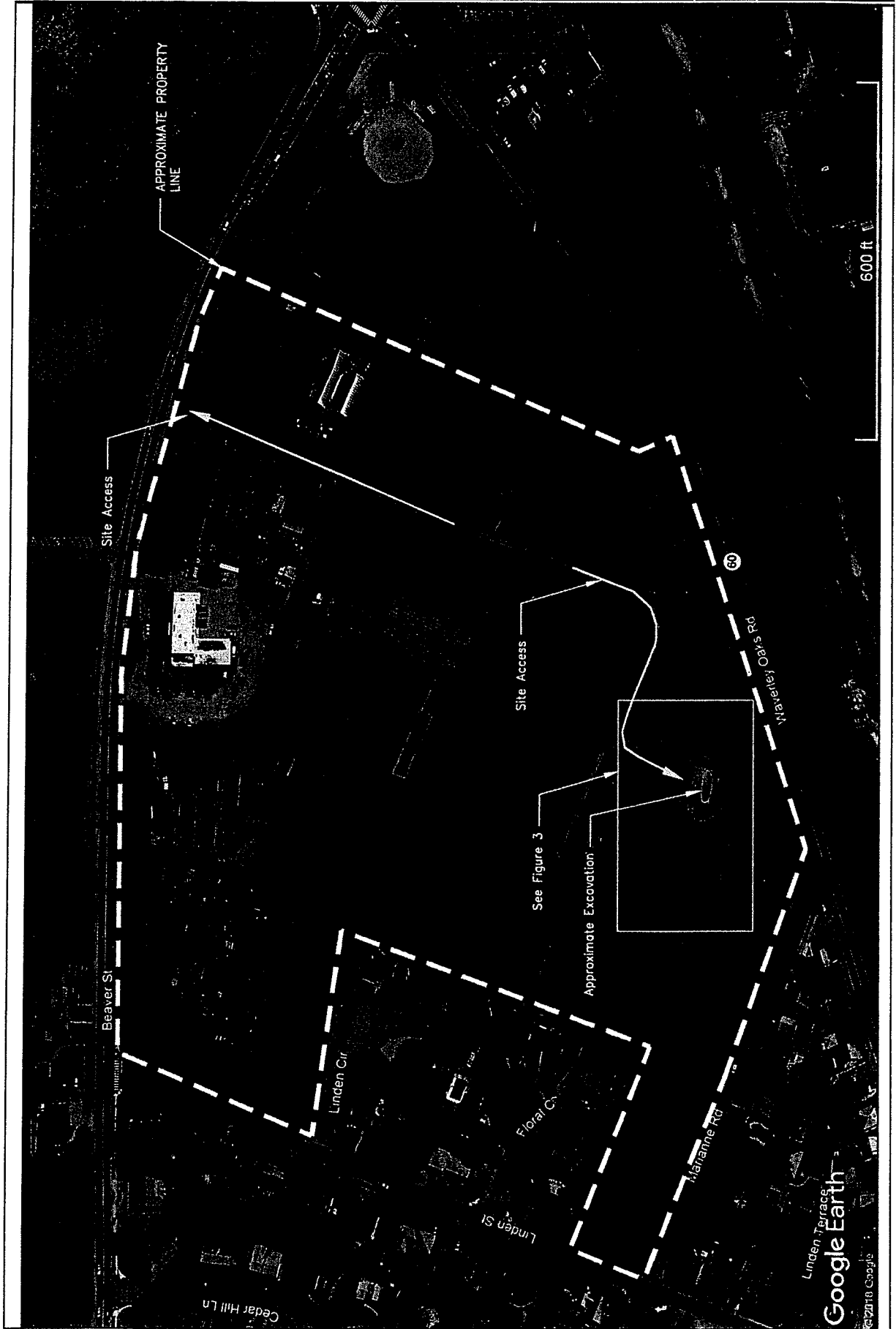


NO.	DATE	REVISION
1	1/15/2018	ISSUED FOR PERMIT
2	1/15/2018	ISSUED FOR PERMIT
3	1/15/2018	ISSUED FOR PERMIT
4	1/15/2018	ISSUED FOR PERMIT
5	1/15/2018	ISSUED FOR PERMIT
6	1/15/2018	ISSUED FOR PERMIT
7	1/15/2018	ISSUED FOR PERMIT
8	1/15/2018	ISSUED FOR PERMIT
9	1/15/2018	ISSUED FOR PERMIT
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12	1/15/2018	ISSUED FOR PERMIT
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14	1/15/2018	ISSUED FOR PERMIT
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16	1/15/2018	ISSUED FOR PERMIT
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97	1/15/2018	ISSUED FOR PERMIT
98	1/15/2018	ISSUED FOR PERMIT
99	1/15/2018	ISSUED FOR PERMIT
100	1/15/2018	ISSUED FOR PERMIT

# PROJECT AREA OVERVIEW



FIGURE 2  
1830.20



NO	DATE	REVISIONS
1	10/25/18	1.0K
2	10/27/18	1.1A

## **TABLES**

Table 1  
Soil Headspace Screening Results - TOVs (ppmv)  
240 Beaver St., Waltham, MA  
May 12, 2022

ID#	Depth	PID
GP3-1	0-2'	0.0
	2-4'	0.5
	4-6'	0.1
	6-8'	0.9
	8-10'	0.3
	10-12'	0.0
	12-14'	0.0
	14-15'	0.1
ID#	Depth	PID
GP3-2	0-2'	0.1
	2-4'	0
	4-6'	0.1
	6-8'	0.1
	8-10'	0.3
	10-12'	0.9
	12-14'	0.6
	14-15'	0.1
ID#	Depth	PID
GP3-3	0-2'	0.1
	2-4'	1.4
	4-6'	2.2
	6-8'	0.9
	8-10'	0.1
	10-12'	0.0
	12-14'	0.0
	14-15'	0
ID#	Depth	PID
GP3-4	0-2'	0.1
	2-4'	0.0
	4-6'	0.1
	6-8'	0.1
	8-10'	0.3
	10-12'	0.9
	12-14'	0.6
	14-15'	0.1
ID#	Depth	PID
GP3-5	0-2'	0.1
	2-4'	3.7
	4-6'	7.8
	6-8'	4.2
	8-10'	0.3
	10-12'	0.80
	12-14'	0.1
	14-15'	0.0

ID#	Depth	PID
GP3-6	0-2'	0.1
	2-4'	2.2
	4-6'	0.5
	6-8'	0.1
	8-10'	0.3
	10-12'	0.9
	12-14'	0.6
	14-15'	0.1
ID#	Depth	PID
GP3-7	0-2'	0.1
	2-4'	0.1
	4-6'	0.2
	6-8'	0.1
	8-10'	0.1
	10-12'	0.0
	12-14'	0.0
	14-15'	0
ID#	Depth	PID
GP3-8	0-2'	0.0
	2-4'	0.0
	4-6'	1.2
	6-8'	2.9
	8-10'	0.3
	10-12'	0.4
	12-14'	0.0
	14-15'	0.0
ID#	Depth	PID
GP3-9	0-2'	0.0
	2-4'	0.4
	4-6'	1.9
	6-8'	0.9
	8-10'	0.3
	10-12'	0.0
	12-14'	0.0
	14-15'	0

Table 2  
Soil Precharacterization Results  
240 Beaver Street, Waltham  
May 12, 2022

Parameter	Reportable Concentrations (RCs) RCS-1	Comm-97 Limits for In-state Lined Landfill	Comm-97 Limits for In-state Unlined Landfill	SAMPLING LOCATION	
				Comp #1 (2-10ft)	GP 3-5 (4-6ft)
Sampling Date				5/12/2022 12:00:00 PM	5/12/2022 12:00:00 PM
Sample Depth				2-10 Feet	4-6 Feet
SM 2540G (% Wt)					
% Solids	~	~	~	73.0	73.0
SM21-23 2510B Modified (µmhos/cm)					
SPECIFIC CONDUCTANCE	~	8000	4000	9.7	NT
SW-846 1010A-B (°F)					
FLASHPOINT	~	~	>140 °F	> 212 °F	NT
SW-846 6010D (mg/Kg dry) Metals Digestion					
ANTIMONY	20			ND (2.2)	NT
ARSENIC	20	40	40	9.8	NT
BARIUM	1000			82	NT
BERYLLIUM	90			0.35	NT
CADMIUM	70	80	30	0.47	NT
CHROMIUM	100	1000	1000	24	NT
LEAD	200	2000	1000	170	NT
NICKEL	600			24	NT
SELENIUM	400			ND (4.4)	NT
SILVER	100			ND (0.44)	NT
THALLIUM	8			ND (2.2)	NT
VANADIUM	400			160	NT
ZINC	1000			160	NT
SW-846 7471B (mg/Kg dry) Metals Digestion					
MERCURY	20	10	10	0.40	NT
SW-846 6010D (mg/Kg dry) Metals Digestion					
TCLP Lead	~	5	5	0.9	NT
SW-846 8081B (mg/Kg dry)					
ALDRIN	0.08			ND (1.4) *	NT
ALPHA-BHC	50			ND (1.4)	NT
BETA-BHC	10			ND (1.4)	NT
DELTA-BHC	10			ND (1.4)	NT
GAMMA-BHC (LINDANE)	0.003			ND (0.55) *	NT
CHLORDANE	5			ND (5.5) *	NT
4,4'-DDD	8			34	NT
4,4'-DDE	6			3.2	NT
4,4'-DDT	6			1400	NT
DIELDRIN	0.08			7.8	NT
ENDOSULFAN I	0.5			ND (1.4) *	NT
ENDOSULFAN II	0.5			ND (2.2) *	NT
ENDOSULFAN SULFATE	~			ND (2.2)	NT
ENDRIN	10			ND (2.2)	NT
ENDRIN KETONE	~			ND (2.2)	NT
HEPTACHLOR	0.3			ND (1.4) *	NT
HEPTACHLOR EPOXIDE	0.1			ND (1.4) *	NT
HEXACHLOROBENZENE	0.7			ND (1.6) *	NT
METHOXYCHLOR	200			ND (14)	NT
SW-846 8082A (mg/Kg dry)					
PCB 1016	1			ND (11) *	NT
PCB 1221	1			ND (11) *	NT
PCB 1232	1			ND (11) *	NT
PCB 1242	1			ND (11) *	NT
PCB 1248	1			ND (11) *	NT
PCB 1254	1			ND (11) *	NT
PCB 1260	1			ND (11) *	NT
PCB 1262	1			ND (11) *	NT
PCB 1268	1			ND (11) *	NT
Total PCBs		2	2		
SW-846 8100 Modified (mg/Kg dry)					
TPH	1000	5000	2500	2600	NT
SW-846 8151A (µg/kg dry)					
2,4-D	100000			ND (140)	NT
2,4-DB	100000			ND (140)	NT
2,4,5-TP (SILVEX)	100000			ND (14)	NT
2,4,5-T	100000			ND (14)	NT
DALAPON	~			ND (340)	NT
DICAMBA	500000			ND (14)	NT
DICHLOROPROP	~			ND (140)	NT
MCPA	100000			ND (14000)	NT
MCPP	~			ND (14000)	NT
SW-846 8260D (mg/Kg dry)					
ACETONE	6			NT	0.038
TERT-AMYL METHYL ETHER	~			NT	ND (0.0014)
BENZENE	2			NT	0.0011
BROMOBENZENE	100			NT	ND (0.0027)
BROMOCHLOROMETHANE	~			NT	ND (0.0027)
BROMODICHLOROMETHANE	0.1			NT	ND (0.0027)
BROMOFORM	0.1			NT	ND (0.0027)
BROMOMETHANE	0.5			NT	ND (0.014)
2-BUTANONE (MEK)	4			NT	ND (0.055)
N-BUTYLBENZENE	~			NT	ND (0.0027)
SEC-BUTYLBENZENE	~			NT	ND (0.0027)
TERT-BUTYLBENZENE	100			NT	ND (0.0027)
TERT-BUTYLETHYL ETHER	~			NT	ND (0.0014)
CARBON DISULFIDE	100			NT	0.017
CARBON TETRACHLORIDE	5			NT	ND (0.0027)
CHLOROBENZENE	1			NT	ND (0.0027)

Table 2  
Soil Precharacterization Results  
240 Beaver Street, Waltham  
May 12, 2022

Parameter	Reportable Concentrations (RCs) RCS-1	Comm-97 Limits for In-state Lined Landfill	Comm-97 Limits for In-state Unlined Landfill	SAMPLING LOCATION	
				Comp #1 (2-10ft)	GP 3-5 (4-6ft)
Sampling Date				5/12/2022 12:00:00 PM	5/12/2022 12:00:00 PM
Sample Depth				2-10 Feet	4-6 Feet
CHLORODIBROMOMETHANE	0.005			NT	ND (0.0014)
CHLOROETHANE	100			NT	ND (0.027)
CHLOROFORM	0.2			NT	ND (0.0055)
CHLOROMETHANE	100			NT	ND (0.014)
2-CHLOROTOLUENE	100			NT	ND (0.0027)
4-CHLOROTOLUENE	100			NT	ND (0.0027)
1,2-DIBROMO-3-CHLOROPROPANE	10			NT	ND (0.0027)
1,2-DIBROMOETHANE (EDB)	0.1			NT	ND (0.0014)
DIBROMOMETHANE	500			NT	ND (0.0027)
1,2-DICHLOROBENZENE	9			NT	ND (0.0027)
1,3-DICHLOROBENZENE	3			NT	ND (0.0027)
1,4-DICHLOROBENZENE	0.7			NT	ND (0.0027)
DICHLORODIFLUOROMETHANE	1000			NT	ND (0.027)
1,1-DICHLOROETHANE	0.4			NT	ND (0.0027)
1,2-DICHLOROETHANE	0.1			NT	ND (0.0027)
1,1-DICHLOROETHYLENE	3			NT	ND (0.0055)
CIS-1,2-DICHLOROETHYLENE	0.1			NT	ND (0.0027)
TRANS-1,2-DICHLOROETHYLENE	1			NT	ND (0.0027)
1,2-DICHLOROPROPANE	0.1			NT	ND (0.0027)
1,3-DICHLOROPROPANE	500			NT	ND (0.0014)
2,2-DICHLOROPROPANE	0.1			NT	ND (0.0027)
1,1-DICHLOROPROPENE	0.01			NT	ND (0.0027)
CIS-1,3-DICHLOROPROPENE	0.01			NT	ND (0.0014)
TRANS-1,3-DICHLOROPROPENE	0.01			NT	ND (0.0014)
DIETHYL ETHER	100			NT	ND (0.027)
DIISOPROPYL ETHER	100			NT	ND (0.0014)
1,4-DIOXANE	0.2			NT	ND (0.14)
ETHYLBENZENE	40			NT	ND (0.0027)
HEXACHLOROBUTADIENE	30			NT	ND (0.0027)
2-HEXANONE	100			NT	ND (0.027)
ISOPROPYLBENZENE	1000			NT	ND (0.0027)
P-ISOPROPYLTOLUENE	100			NT	ND (0.0027)
METHYL TERT-BUTYL ETHER (MTBE)	0.1			NT	ND (0.0055)
METHYLENE CHLORIDE	0.1			NT	ND (0.027)
4-METHYL-2-PENTANONE (MIBK)	0.4			NT	ND (0.027)
NAPHTHALENE	4			NT	ND (0.0055)
N-PROPYLBENZENE	100			NT	ND (0.0027)
STYRENE	3			NT	ND (0.0027)
1,1,1,2-TETRACHLOROETHANE	0.1			NT	ND (0.0027)
1,1,2,2-TETRACHLOROETHANE	0.005			NT	ND (0.0014)
TETRACHLOROETHYLENE	1			NT	ND (0.0027)
TETRAHYDROFURAN	500			NT	ND (0.014)
TOLUENE	30			NT	ND (0.0027)
1,2,3-TRICHLOROBENZENE	~			NT	ND (0.0027)
1,2,4-TRICHLOROBENZENE	2			NT	ND (0.0027)
1,1,1-TRICHLOROETHANE	30			NT	ND (0.0027)
1,1,2-TRICHLOROETHANE	0.1			NT	ND (0.0027)
TRICHLOROETHYLENE	0.3			NT	ND (0.0027)
TRICHLOROFLUOROMETHANE	1000			NT	ND (0.014)
1,2,3-TRICHLOROPROPANE	100			NT	ND (0.0027)
1,2,4-TRIMETHYLBENZENE	1000			NT	ND (0.0027)
1,3,5-TRIMETHYLBENZENE	10			NT	ND (0.0027)
VINYL CHLORIDE	0.7			NT	ND (0.014)
M/P-XYLENE	100			NT	ND (0.0055)
O-XYLENE	100			NT	ND (0.0027)
Total VOCs		10	4		0.0561
<b>SW-846 8270E (mg/Kg dry)</b>					
BIPHENYL	0.05			ND (4.6) *	NT
ACENAPHTHENE	4			ND (1.2)	NT
ACENAPHTHYLENE	1			ND (1.2) *	NT
ACETOPHENONE	1000			ND (2.3)	NT
ANILINE	1000			ND (2.3)	NT
ANTHRACENE	1000			ND (1.2)	NT
BENZO(A)ANTHRACENE	7			ND (1.2)	NT
BENZO(A)PYRENE	2			ND (1.2)	NT
BENZO(B)FLUORANTHENE	7			ND (1.2)	NT
BENZO(G,H,I)PERYLENE	1000			ND (1.2)	NT
BENZO(K)FLUORANTHENE	70			ND (1.2)	NT
BIS(2-CHLOROETHOXY)METHANE	500			ND (2.3)	NT
BIS(2-CHLOROETHYL)ETHER	0.7			ND (2.3) *	NT
BIS(2-CHLOROISOPROPYL)ETHER	0.7			ND (2.3) *	NT
BIS(2-ETHYLHEXYL)PHthalate	90			ND (2.3)	NT
4-BROMOPHENYL PHENYL ETHER	100			ND (2.3)	NT
BUTYLBENZYLPHthalate	100			ND (2.3)	NT
4-CHLOROANILINE	1			ND (4.5) *	NT
2-CHLORONAPHTHALENE	1000			ND (2.3)	NT
2-CHLOROPHENOL	0.7			ND (2.3) *	NT
CHRYSENE	70			ND (1.2)	NT
DIBENZ(A,H)ANTHRACENE	0.7			ND (1.2) *	NT
DIBENZOFURAN	100			ND (2.3)	NT
DI-N-BUTYLPHthalate	50			ND (2.3)	NT
1,2-DICHLOROBENZENE	9			ND (2.3)	NT
1,3-DICHLOROBENZENE	3			ND (2.3)	NT
1,4-DICHLOROBENZENE	0.7			ND (2.3) *	NT

Table 2  
Soil Precharacterization Results  
240 Beaver Street, Waltham  
May 12, 2022

Parameter	Reportable Concentrations (RCs) RCS-1	Comm-97 Limits for In-state Unlined Landfill	Comm-97 Limits for In-state Unlined Landfill	SAMPLING LOCATION	
				Comp #1 (2-10ft)	GP 3-5 (4-6ft)
Sampling Date				5/12/2022 12:00:00 PM	5/12/2022 12:00:00 PM
Sample Depth				2-10 Feet	4-6 Feet
3,3'-DICHLOROBENZIDINE	3			ND (1.2)	NT
2,4-DICHLOROPHENOL	0.7			ND (2.3) *	NT
DIETHYLPHTHALATE	10			ND (2.3)	NT
2,4-DIMETHYLPHENOL	0.7			ND (2.3) *	NT
DIMETHYLPHTHALATE	0.7			ND (2.3) *	NT
2,4-DINITROPHENOL	3			ND (4.5) *	NT
2,4-DINITROTOLUENE	0.7			ND (2.3) *	NT
2,6-DINITROTOLUENE	100			ND (2.3)	NT
DI-N-OCTYLPHTHALATE	1000			ND (2.3)	NT
1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	50			ND (2.3)	NT
FLUORANTHENE	1000			ND (1.2)	NT
FLUORENE	1000			ND (1.2)	NT
HEXACHLOROBENZENE	0.7			0.73	NT
HEXACHLOROBUTADIENE	30			ND (2.3)	NT
HEXACHLOROETHANE	0.7			ND (2.3) *	NT
INDENO(1,2,3-CD)PYRENE	7			ND (1.2)	NT
ISOPHORONE	100			ND (2.3)	NT
2-METHYLNAPHTHALENE	0.7			ND (1.2) *	NT
O-CRESOL	500			ND (2.3)	NT
M/P-CRESOL	500			ND (2.3)	NT
NAPHTHALENE	4			ND (1.2)	NT
NITROBENZENE	500			ND (2.3)	NT
2-NITROPHENOL	100			ND (2.3)	NT
4-NITROPHENOL	100			ND (4.5)	NT
PENTACHLOROPHENOL	3			ND (2.3)	NT
PHENANTHRENE	10			ND (1.2)	NT
PHENOL	1			ND (2.3) *	NT
PYRENE	1000			ND (1.2)	NT
PYRIDINE	500			ND (2.3)	NT
1,2,4-TRICHLOROBENZENE	2			ND (2.3) *	NT
2,4,5-TRICHLOROPHENOL	4			ND (2.3)	NT
2,4,6-TRICHLOROPHENOL	0.7			ND (2.3) *	NT
Total SVOCs		100	100	0.73	
SW-846 9014 (mg/Kg)					
REACTIVE CYANIDE	~	~	~	ND (3.9)	NT
SW-846 9030A (mg/Kg)					
REACTIVE SULFIDE	~	~	~	ND (19)	NT
SW-846 9045C (pH Units)					
PH	~	~	~	7.9	NT

NOTES:

1. An asterisk (\*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or limit available
5. Shaded values exceed the MCP Reportable Concentrations (RCs).

**APPENDIX A**

**SOIL BORING LOGS**  
**AND WELL CONSTRUCTION DIAGRAMS**



**TEST BORING LOG**

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 20 ft  
 Date Started: 5/28/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/28/2019  
 Ground El. \_\_\_\_\_

BORING ID: GP1-7MW  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)		
-1					0.1			
-2					2			
-3					2	tan to gray fine to silty fine SAND, little medium sand with wood and glass; dry		
-4					0.0			
-5					4			
-6					4			
-7			5'		0.1			
-8	S2		5'	48"	6			
-9					6			
-10					0.1			
-11					8			
-12					8			
-13					0.3	See Above		
-14			10'		10			
-15	S3		10'	60"	10			
-16					0.9			
-17					12			
-18					12			Approximate Water Table
-19					0.6			gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet
-20					14			
-21					14			
-22			15'		0.1			
-23	S4		15'		16			
-24					16			
-25					0.0			
-26					18			
-27					18			
-28					0.0			
-29			20'		20	End of Boring at 20 feet; No Refusal		
-30								
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand			
					Rock: NA			
					Well Depth: NA			
					Boring: 20'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830.20  
 Total Depth: 15'  
 Date Started: 5/12/2022  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/12/2022  
 Ground El.

BORING ID: GP3-1  
 Logged By: AMS  
 Contractor: Soil Ex  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	60"	0	tan to brown fine SAND, little coarse sand trace medium sand and gravel; dry (FILL)  brown to black fine to silty fine SAND, black fine sand, ash layers; dry (FILL)	
-1					0.0		
-2					2		
-3					2		
-4					0.5		
-5					4		
-6					4		
-7			5'		0.1		
-8	S2		5'	48"	6		
-9					6		
-10					0.9	black fine to medium SAND with ash and broken with gravel and orange sand lenses; dry	
-11					8		
-12					8		
-13					0.3		
-14			10'		10	black tan fine to silty fine SAND, gray silt seams; moist	
-15	S3		10'	60"	10		
-16					0.0		
-17					12		
-18					12	gray silty fine SAND, trace medium sand moist to wet  gray fine to silty fine SAND, trace medium sand, trace coarse sand; wet	
-19					0.0		
-20					14		
-21					14		
-22			15'		0.1		
-23	S4		15'		15		
-24							
-25							
-26							
-27							
-28							
-29							
-30							
-31							
-32							
-33							
-34							
-35							
-36							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater	Measuring Point	Overburden: Fill; Sand			
				Rock: NA			
				Well Depth: NA			
				Boring: 15'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830.20  
 Total Depth: 15'  
 Date Started: 5/12/2022  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/12/2022  
 Ground El.  
 BORING ID: GP3-2  
 Logged By: AMS  
 Contractor: Soil Ex  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	48"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)  brown to black fine to silty fine SAND, layered broken brick, concrete, tan fine sand. ash layers; dry (FILL) note: building materials of pasty caulking, glass and metals pieces	
-1					0.1		
					2		
-2					2		
					0.0		
-3					4		
					4		
-4					0.1		
			5'		6		
-5	S2		5'	48"	6		
					0.1		
-6					8		
					8		
-7					0.3		
					10		
-8					10		
					0.9		
-9					12		
					12		
-10	S3		10'	60"	0.6		
					14		
-11					14		
					0.1		
-12					15		
-13							
-14							
-15	S4		15'				
-16							
-17							
-18							
-19							
-20							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand		
					Rock: NA		
					Well Depth: NA		
					Boring: 15'		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830.20  
 Total Depth: 15'  
 Date Started: 5/12/2022  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/12/2022  
 Ground El.  
 BORING ID: GP3-3  
 Logged By: AMS  
 Contractor: Soil Ex  
 Sheet #: 1

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	42"	0		tan to brown fine SAND, little coarse sand trace medium sand and gravel; dry (FILL)	
-1					0.1			
					2			
-2					2			
					1.4			
-3					4			
					4			
-4					4			
			5'		2.2			
-5	S2		5'	48"	6			
					6			
-6					0.9			
					8			
-7					8			
					0.1			
-8					10			
			10'		10			
-9					10			
					0.0			
-10	S3		10'	48"	12			
					12			
-11					0.0			
					14			
-12					14			
			15'		0.0			
-13					15			
-14								
-15	S4		15'					
-16								
-17								
-18								
-19								
-20								
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater		Measuring Point		Overburden: Fill; Sand		
						Rock: NA		
						Well Depth: NA		
						Boring: 15'		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830.20  
 Total Depth: 15'  
 Date Started: 5/12/2022  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/12/2022  
 Ground El.:  
 BORING ID: GP3-4  
 Logged By: AMS  
 Contractor: Soil Ex  
 Sheet #: 1

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery					
0	S1		0'	48"	0		tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)		
-1					0.1				
-2					2				
-3					0.0		brown to black fine to silty fine SAND, layered broken brick, concrete, tan fine sand, ash layers; dry (FILL)		
-4					4				
-5	S2		5'	48"	0.1				
-6					6		black fine to medium SAND with ash and broken brick and coal pieces; dry		
-7					0.1				
-8					8				
-9					0.3		black tan fine to silty fine SAND, gray silt layers; moist		
-10	S3		10'	60"	10				
-11					0.9				gray silty fine SAND, trace medium sand moist to wet
-12					12				
-13					0.6				
-14					14		gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; wet		
-15	S4		15'		0.1				
-16					15				End of Boring at 15 feet; No Refusal
-17									
-18									
-19									
-20									
Groundwater Measurements							Summary		
Date	Time	Depth to Groundwater		Measuring Point		Overburden: Fill; Sand			
						Rock: NA			
						Well Depth: NA			
						Boring: 15'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830.20  
 Total Depth: 15'  
 Date Started: 5/12/2022  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/12/2022  
 Ground El.  
 BORING ID: GP3-5  
 Logged By: AMS  
 Contractor: Soil Ex  
 Sheet #: 1

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery					
0	S1		0'	40"	0		tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)		
-1					0.1				
-2					2				
-3					2	brown to black fine to silty fine SAND, layered broken brick, concrete, tan fine sand. ash layers; dry (FILL)			
-4					3.7				
-5					4				
-6	S2		5'	48"	4	note: building materials of pasty caulking, glass and metals pieces			
-7					7.8				
-8					6				
-9					6	black fine to medium SAND with ash and broken concrete and coal pieces; dry			
-10					4.2				
-11					8				
-12					8	black tan fine to silty fine SAND, gray silt seams; moist			
-13					0.3				
-14			10'		10				
-15	S3		10'	60"	10	gray silty fine SAND, trace medium sand moist to wet			
-16					0.8				
-17					12				
-18					12	Approximate Water Table			
-19					0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; wet			
-20					14				
-21					14				
-22			15'		0.0	End of Boring at 15 feet; No Refusal			
-23	S4		15'		15				
-24									
-25									
-26									
-27									
-28									
-29									
-30									
-31									
Groundwater Measurements						Summary			
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand				
					Rock: NA				
					Well Depth: NA				
					Boring: 15'				

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830.20  
 Total Depth: 15'  
 Date Started: 5/12/2022  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/12/2022  
 Ground El.:  
 BORING ID: GP3-6  
 Logged By: AMS  
 Contractor: Soil Ex  
 Sheet #: 1

Depth (Feet)	Sample					Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery	PID Hdspace (ppmv)		
0	S1		0'	48"	0	tan to brown fine SAND; little coarse sand trace medium sand with wood and gravel; dry (FILL)	
-1					0.1		
					2		
-2					2		
					2.2		
-3					4		
					4		
-4					4		
			5'		0.5		
-5	S2		5'	48"	6		
					6		
-6					0.1		
					8		
-7					8		
					0.3		
-8					10		
			10'		10		
-9					0.9		
					12		
-10	S3		10'	60"	12		
					0.6		
-11					14		
					14		
-12					0.1		
			15'		15		
-13	S4		15'				
-14							
-15							
-16							
-17							
-18							
-19							
-20							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand		
					Rock: NA		
					Well Depth: NA		
					Boring: 15'		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830.20  
 Total Depth: 15'  
 Date Started: 5/12/2022  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/12/2022  
 Ground El.  
 BORING ID: GP3-7  
 Logged By: AMS  
 Contractor: Soil Ex  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	50"	0	tan to brown fine SAND, little coarse sand trace medium sand and gravel; dry (FILL)	
-1					0.1		
-2					2		
-3					0.1		
-4					4		
-5	S2		5'	48"	0.2		
-6					6		
-7					0.1		
-8					8		
-9					0.1		
-10	S3		10'	60"	10	brown to black fine to silty fine SAND, black coarse sand with crushed brick dry (FILL)	
-11					0.0		
-12					12		
-13					0.0		
-14					14		
-15	S4		15'		0.0		
-16					15		
-17							
-18							
-19							
-20							



# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830.20  
 Total Depth: 15'  
 Date Started: 5/12/2022  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/12/2022  
 Ground El.  
 BORING ID: GP3-8  
 Logged By: AMS  
 Contractor: Soil Ex  
 Sheet #: 1

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	48"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)  black fine to silty fine SAND, crushed brick, concrete, tan fine sand. ash layers with gravel; dry (FILL)  black fine to medium SAND with ash and broken concrete and coal pieces; dry  black tan fine to silty fine SAND, gray silt seams; moist		
-1					0.0			
-2					2			
-3					0.0			
-4					4			
-5	S2		5'	48"	1.2			
-6					6			
-7					2.9			
-8					8			
-9			10'		0.3			
-10	S3		10'	60"	10	gray silty fine SAND, trace medium sand moist to wet  gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; wet		
-11					0.4			
-12					12			
-13					0.0			
-14					14			
-15	S4		15'		0.0			
-16					15			
-17								
-18								
-19								
-20								
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand			
					Rock: NA			
					Well Depth: NA			
					Boring: 15'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830.20  
 Total Depth: 15'  
 Date Started: 5/12/2022  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 5/12/2022  
 Ground El.  
 BORING ID: GP3-9  
 Logged By: AMS  
 Contractor: Soil Ex  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	42"	0	tan to brown fine SAND, little coarse sand trace medium sand and gravel; dry (FILL)	
-1					0.0		
					2		
-2					2		
					0.4		
-3					4		
					4		
-4			5'		1.9		
-5	S2		5'	48"	6		
					6		
-6					0.9		
					8		
-7					8		
					0.3		
-8			10'		10		
-9					10		
-10	S3		10'	48"	0.0		
					12		
-11					12		
					0.0		
-12					14		
					14		
-13			15'		0.0		
-14					15		
-15	S4		15'				
-16							
-17							
-18							
-19							
-20							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand		
					Rock: NA		
					Well Depth: NA		
					Boring: 15'		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.  
 BORING ID: GP4-1  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample					Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery	PID Hdspace (ppmv)		
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)	
-1					0.1		
-2					2		
-3					2		
-4					0.0		
-5					4		
-6					4		
-7			5'		0.1		
-8	S2		5'	48"	6		
-9					6		
-10					0.1		
-11					8		
-12					8		
-13					0.3		
-14			10'		10		
-15	S3		10'	60"	10		
-16					0.9		
-17					12		
-18					12		
-19					0.6		
-20					14		
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# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.

BORING ID: GP4-2  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)		
-1					0.1			
-2					2			
-3					0.0	tan to gray fine to silty fine SAND, little medium sand with wood and glass; dry (FILL)		
-4					4			
-5	S2		5'	48"	0.1			
-6					6	gray fine to silty fine SAND, trace medium sand, with broken glass, asphalt pieces, concrete pieces; dry (FILL)		
-7					0.1			
-8					8			
-9					0.3			
-10	S3		10'	60"	10			
-11					0.9	gray fine to silty fine SAND, trace medium sand, moist		
-12					12			
-13					0.6	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet		
-14					14			
-15			15'			End of Boring at 15 feet; No Refusal		
-16								
-17								
-18								
-19								
-20								
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand			
					Rock: NA			
					Well Depth: NA			
					Boring: 15'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.

BORING ID: GP4-3  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0		tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)	
-1					0.0			
					2			
-2					2			
					0.0		tan to gray fine to silty fine SAND, little medium sand with wood and glass; dry (FILL)	
-3					4			
					4			
-4					4			
			5'		0.9		black fine to silty fine SAND, trace medium sand, with broken glass, brick and wood; dry (FILL)	
-5	S2		5'	48"	6			
					6			
-6					1.2			
					8			
-7					8			
-8					0.7			
			10'		10		gray fine to silty fine SAND, trace medium sand, moist	
-10	S3		10'	40"	10			
					0.2			
-11					12			
					12			
-12					0.1	Approximate Water Table	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet	
					14			
-13								
-14							End of Boring at 15 feet; No Refusal	
			15'					
-15								
-16								
-17								
-18								
-19								
-20								
Groundwater Measurements							Summary	
Date	Time	Depth to Groundwater		Measuring Point		Overburden: Fill; Sand		
						Rock: NA		
						Well Depth: NA		
						Boring: 15'		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.

BORING ID: GP4-4  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram	
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)		
-1					0.0			
-2					2			
-3					0.0	tan to gray fine to silty fine SAND, little medium sand with wood and glass; dry (FILL)		
-4					4			
-5	S2		5'	48"	0.9			
-6					6	black fine to silty fine SAND, trace medium sand with broken glass, asphalt pieces, concrete pieces; dry (FILL)		
-7					1.2			
-8					8			
-9					0.7			
-10	S3		10'	40"	10	gray to black fine SAND, little gravel, trace silt with wood; moist (FILL)		
-11					0.2			
-12					12			
-13					0.1	Approximate Water Table		gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet
-14					14			
-15			15'			End of Boring at 15 feet; No Refusal		
-16								
-17								
-18								
-19								
-20								
Groundwater Measurements						Summary		
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand			
					Rock: NA			
					Well Depth: NA			
					Boring: 15'			

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.

BORING ID: GP4-5  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram		
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery					
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)			
-1					0.0				
-2					2				
-3					0.9	tan to gray fine to silty fine SAND, little medium sand with wood and glass; dry (FILL)			
-4					4				
-5	S2		5'	48"	0.1				
-6					6	black fine to silty fine SAND, trace medium sand, with broken glass, metal, clay (FILL)			
-7					0.6				
-8					8				
-9					0.4				
-10	S3		10'	40"	10	gray to black fine SAND, little gravel, trace silt with wood; moist (FILL)			
-11					0.0				
-12					12				
-13					0.1	gray fine to silty fine SAND, trace medium sand, trace coarse sand with gravel pieces; moist to wet			
-14					14				
-15			15'						
-16						End of Boring at 15 feet; No Refusal			
-17									
-18									
-19									
-20									
Groundwater Measurements						Summary			
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand				
					Rock: NA				
					Well Depth: NA				
					Boring: 15'				

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.:  
 BORING ID: GP4-6  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0	tan to brown fine SAND, little coarse sand trace medium sand with wood and gravel; dry (FILL)	
-1					0.0		
-2					2		
-3					2		
-4					0.0		
-5					4		
-6					4		
-7			5'		0.1		
-8	S2		5'	48"	0.1		
-9					6		
-10					6		
-11					0.0		
-12					8		
-13					8		
-14					1.6		
-15			10'		10		
-16	S3		10'	45"	10		
-17					0.0		
-18					12		
-19					12		
-20					0.1		
-21					14		
-22							
-23							
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# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.

BORING ID: GP4-7  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0	S1		0'	40"	0	black asphalt and graded base	
-1					0.0	tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)	
					2		
-2					2		
					1.3	tan to gray fine to silty fine SAND, little medium sand; dry	
-3					4		
					4		
-4					4		
			5'		1.1		
-5	S2		5'	48"	6	black fine to silty fine SAND, trace medium sand, with wood; dry (FILL)	
					6		
-6					0.9		
					8		
-7					8		
					0.3		
-8					10		
			10'		10		
-9					2.6		
-10	S3		10'	60"	12		
					12		
-11					1.3		
					14		
-12							
-13							
-14							
			15'				
-15							
-16							
-17							
-18							
-19							
-20							
Groundwater Measurements						Summary	
Date	Time	Depth to Groundwater		Measuring Point	Overburden: Fill; Sand		
					Rock: NA		
					Well Depth: NA		
					Boring: 15'		

# TEST BORING LOG

CDW Consultants, Inc.

Project No.: 1830  
 Total Depth: 15 ft  
 Date Started: 12/9/2019  
 Casing ID:  
 Remarks: 6610 DT Geoprobe

Client: City of Waltham  
 Location: 240 Beaver St  
 Completed: 12/9/2019  
 Ground El.

BORING ID: GP4-8  
 Logged By: AMS  
 Contractor: Crawford  
 Sheet #: 1

Depth (Feet)	Sample					PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery				
0	S1		0'	48"	0		black asphalt and graded base	
-1					0.0		tan to gray fine SAND, trace gravel with broken concrete pieces; dry (FILL)	
-2					2			
-3					2		tan to gray fine to silty fine SAND, little medium sand; dry (FILL)	
-4					0.0			
-5					4			
-6					4			
-7	S2		5'	40"	0.9			
-8					6			
-9					6		black fine to silty fine SAND, trace medium sand, with wood; dry (FILL)	
-10					1.9			
-11					8		see above with 6" concrete layer	
-12					8			
-13					0.0			
-14					10			
-15	S3		10'	48"	10		black fine to silty fine SAND, trace medium sand, trace coarse sand; moist to wet (FILL)	
-16					0.8			
-17					12			
-18					12			
-19					0.7			
-20					14			
-21							End of Boring at 15 feet; No Refusal	
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**APPENDIX B**

**LABORATORY ANALYTICAL REPORTS  
AND CHAIN OF CUSTODY RECORDS**

May 31, 2022

Alan Sundquist  
CDW Consultants, Inc.  
4 California Drive, Suite 301  
Framingham, MA 01760

Project Location: 240 Beaver St., Waltham, MA  
Client Job Number:  
Project Number: 1830.1  
Laboratory Work Order Number: 22E0834

Enclosed are results of analyses for samples as received by the laboratory on May 12, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kerry K. McGee  
Project Manager

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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

CDW Consultants, Inc.  
4 California Drive, Suite 301  
Framingham, MA 01760  
ATTN: Alan Sundquist

REPORT DATE: 5/31/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1830.1

## ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22E0834

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 240 Beaver St., Waltham, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Comp #1 (2-10ft)	22E0834-01	Soil		SM 2540G SM21-23 2510B Modified SW-846 1010A-B SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8270E SW-846 9014 SW-846 9030A SW-846 9045C	
GP 3-5 (4-6ft)	22E0834-02	Soil		SM 2540G SW-846 8260D	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8151 samples were derivatized on 05/27/22.

For method 8151 samples analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.



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SW-846 6010D

**Qualifications:****M-10**

The reporting limit verification for the AIHA lead program is outside of control limits for this element. Any reported result at or near the detection limit may be biased on the high side.

**Analyte & Samples(s) Qualified:****Lead**

22E0834-01[Comp #1 (2-10ft)], B308621-SRM1

SW-846 8081B

**Qualifications:****RL-11**

Elevated reporting limit due to high concentration of target compounds.

**Analyte & Samples(s) Qualified:**

22E0834-01[Comp #1 (2-10ft)]

**S-01**

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

**Analyte & Samples(s) Qualified:****Decachlorobiphenyl**

22E0834-01[Comp #1 (2-10ft)]

**Decachlorobiphenyl [2C]**

22E0834-01[Comp #1 (2-10ft)]

**Tetrachloro-m-xylene**

22E0834-01[Comp #1 (2-10ft)]

**Tetrachloro-m-xylene [2C]**

22E0834-01[Comp #1 (2-10ft)]

SW-846 8082A

**Qualifications:****S-01**

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

**Analyte & Samples(s) Qualified:****Decachlorobiphenyl**

22E0834-01[Comp #1 (2-10ft)]

**Decachlorobiphenyl [2C]**

22E0834-01[Comp #1 (2-10ft)]

**Tetrachloro-m-xylene**

22E0834-01[Comp #1 (2-10ft)]

**Tetrachloro-m-xylene [2C]**

22E0834-01[Comp #1 (2-10ft)]

SW-846 8100 Modified

**Qualifications:****S-01**

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

**Analyte & Samples(s) Qualified:****2-Fluorobiphenyl**

22E0834-01[Comp #1 (2-10ft)]

SW-846 8151A

**Qualifications:****O-32**

A dilution was performed as part of the standard analytical procedure.

**Analyte & Samples(s) Qualified:**

22E0834-01[Comp #1 (2-10ft)]

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**S-12**

Surrogate recovery is outside of control limits on confirmatory column, but within control limits on primary column. Data validation is not affected.

**Analyte & Samples(s) Qualified:****2,4-Dichlorophenylacetic acid**

22E0834-01[Comp #1 (2-10ft)]

**V-06**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

**Analyte & Samples(s) Qualified:****MCP**

B309280-BLK1, B309280-BS1, B309280-BSD1

**SW-846 8260D****Qualifications:****S-17**

Surrogate recovery is outside of control limits. Data validation is not affected since all associated results are less than the reporting limit and bias is on the high side.

**Analyte & Samples(s) Qualified:****1,2-Dichloroethane-d4**

22E0834-02[GP 3-5 (4-6ft)]

**V-16**

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

**Analyte & Samples(s) Qualified:****1,4-Dioxane**

B308386-BSD1

**V-34**

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

**Analyte & Samples(s) Qualified:****Bromomethane**

22E0834-02[GP 3-5 (4-6ft)], B308386-BLK1, B308386-BS1, B308386-BSD1, S071520-CCV1

**V-36**

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

**Analyte & Samples(s) Qualified:****2-Butanone (MEK)**

B308386-BS1, B308386-BSD1, S071520-CCV1

**2-Hexanone (MBK)**

B308386-BS1, B308386-BSD1, S071520-CCV1

**SW-846 8270E****Qualifications:****R-05**

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

**Analyte & Samples(s) Qualified:****2,4-Dinitrophenol**

22E0834-01[Comp #1 (2-10ft)], B308526-BLK1, B308526-BS1, B308526-BSD1

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:****Aniline**

22E0834-01[Comp #1 (2-10ft)], B308526-BLK1, B308526-BS1, B308526-BSD1, S071740-CCV1

**Bis(2-chloroisopropyl)ether**

B308526-BLK1, B308526-BS1, B308526-BSD1, S071740-CCV1

---

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---

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

**Analyte & Samples(s) Qualified:****4-Chloroaniline**

22E0834-01[Comp #1 (2-10ft)], B308526-BLK1, B308526-BS1, B308526-BSD1, S071740-CCV1

**Bis(2-chloroisopropyl)ether**

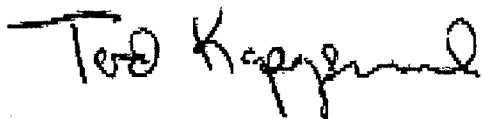
22E0834-01[Comp #1 (2-10ft)]

**SW-846 8100 Modified**

TPH (C9-C36) is quantitated against a calibration made with a diesel standard.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Tod E. Kopycinski  
Laboratory Director

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E0834

Date Received: 5/12/2022

Field Sample #: Comp #1 (2-10ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E0834-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Biphenyl	ND	4.6	0.36	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Acenaphthene	ND	1.2	0.47	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Acenaphthylene	ND	1.2	0.46	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Acetophenone	ND	2.3	0.45	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Aniline	ND	2.3	0.40	mg/Kg dry	5	V-05	SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Anthracene	ND	1.2	0.47	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Benzo(a)anthracene	ND	1.2	0.41	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Benzo(a)pyrene	ND	1.2	0.40	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Benzo(b)fluoranthene	ND	1.2	0.41	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Benzo(g,h,i)perylene	ND	1.2	0.50	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Benzo(k)fluoranthene	ND	1.2	0.40	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Bis(2-chloroethoxy)methane	ND	2.3	0.44	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Bis(2-chloroethyl)ether	ND	2.3	0.45	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Bis(2-chloroisopropyl)ether	ND	2.3	0.62	mg/Kg dry	5	V-34	SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Bis(2-Ethylhexyl)phthalate	ND	2.3	0.46	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
4-Bromophenylphenylether	ND	2.3	0.43	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Butylbenzylphthalate	ND	2.3	0.42	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
4-Chloroaniline	ND	4.5	0.30	mg/Kg dry	5	V-34	SW-846 8270E	5/16/22	5/19/22 0:08	IMR
2-Chloronaphthalene	ND	2.3	0.40	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
2-Chlorophenol	ND	2.3	0.47	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Chrysene	ND	1.2	0.43	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Dibenz(a,h)anthracene	ND	1.2	0.46	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Dibenzofuran	ND	2.3	0.46	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Di-n-butylphthalate	ND	2.3	0.41	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
1,2-Dichlorobenzene	ND	2.3	0.42	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
1,3-Dichlorobenzene	ND	2.3	0.41	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
1,4-Dichlorobenzene	ND	2.3	0.41	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
3,3-Dichlorobenzidine	ND	1.2	0.31	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
2,4-Dichlorophenol	ND	2.3	0.45	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Diethylphthalate	ND	2.3	0.43	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
2,4-Dimethylphenol	ND	2.3	0.59	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Dimethylphthalate	ND	2.3	0.45	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
2,4-Dinitrophenol	ND	4.5	2.0	mg/Kg dry	5	R-05	SW-846 8270E	5/16/22	5/19/22 0:08	IMR
2,4-Dinitrotoluene	ND	2.3	0.48	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
2,6-Dinitrotoluene	ND	2.3	0.51	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Di-n-octylphthalate	ND	2.3	0.67	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	2.3	0.45	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Fluoranthene	ND	1.2	0.43	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Fluorene	ND	1.2	0.47	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Hexachlorobenzene	0.73	2.3	0.45	mg/Kg dry	5	J	SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Hexachlorobutadiene	ND	2.3	0.46	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Hexachloroethane	ND	2.3	0.44	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Indeno(1,2,3-cd)pyrene	ND	1.2	0.52	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Isophorone	ND	2.3	0.47	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E0834

Date Received: 5/12/2022

Field Sample #: Comp #1 (2-10ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E0834-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylnaphthalene	ND	1.2	0.51	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
2-Methylphenol	ND	2.3	0.49	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
3/4-Methylphenol	ND	2.3	0.49	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Naphthalene	ND	1.2	0.46	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Nitrobenzene	ND	2.3	0.47	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
2-Nitrophenol	ND	2.3	0.49	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
4-Nitrophenol	ND	4.5	1.0	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Pentachlorophenol	ND	2.3	0.93	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Phenanthrene	ND	1.2	0.47	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Phenol	ND	2.3	0.51	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Pyrene	ND	1.2	0.45	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
Pyridine	ND	2.3	0.33	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
1,2,4-Trichlorobenzene	ND	2.3	0.44	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
2,4,5-Trichlorophenol	ND	2.3	0.45	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR
2,4,6-Trichlorophenol	ND	2.3	0.44	mg/Kg dry	5		SW-846 8270E	5/16/22	5/19/22 0:08	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	50.9	30-130	5/19/22 0:08
Phenol-d6	48.4	30-130	5/19/22 0:08
Nitrobenzene-d5	47.5	30-130	5/19/22 0:08
2-Fluorobiphenyl	61.4	30-130	5/19/22 0:08
2,4,6-Tribromophenol	59.8	30-130	5/19/22 0:08
p-Terphenyl-d14	58.1	30-130	5/19/22 0:08

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Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E0834

Date Received: 5/12/2022

Field Sample #: Comp #1 (2-10ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E0834-01

Sample Matrix: Soil

Sample Flags: RL-11

## Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	1.4	0.12	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
alpha-BHC [1]	ND	1.4	0.58	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
beta-BHC [1]	ND	1.4	0.49	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
delta-BHC [1]	ND	1.4	0.66	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
gamma-BHC (Lindane) [1]	ND	0.55	0.13	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
Chlordane [1]	ND	5.5	2.1	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
4,4'-DDD [2]	34	1.1	0.099	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
4,4'-DDE [1]	3.2	1.1	0.11	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
4,4'-DDT [1]	1400	110	13	mg/Kg dry	20000		SW-846 8081B	5/13/22	5/22/22 13:57	JMB
Dieldrin [1]	7.8	1.1	0.10	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
Endosulfan I [1]	ND	1.4	0.47	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
Endosulfan II [1]	ND	2.2	0.47	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
Endosulfan sulfate [1]	ND	2.2	0.50	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
Endrin [1]	ND	2.2	0.47	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
Endrin ketone [1]	ND	2.2	0.61	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
Heptachlor [1]	ND	1.4	0.15	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
Heptachlor epoxide [1]	ND	1.4	0.12	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
hexachlorobenzene [1]	ND	1.6	0.62	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
Methoxychlor [1]	ND	14	1.7	mg/Kg dry	200		SW-846 8081B	5/13/22	5/22/22 13:30	JMB
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	*		30-150		S-01		5/22/22 13:30			
Decachlorobiphenyl [2]	*		30-150		S-01		5/22/22 13:30			
Tetrachloro-m-xylene [1]	*		30-150		S-01		5/22/22 13:30			
Tetrachloro-m-xylene [2]	*		30-150		S-01		5/22/22 13:30			

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Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E0834

Date Received: 5/12/2022

Field Sample #: Comp #1 (2-10ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E0834-01

Sample Matrix: Soil

## Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	11	mg/Kg dry	400		SW-846 8082A	5/13/22	5/19/22 8:47	JEA
Aroclor-1221 [1]	ND	11	mg/Kg dry	400		SW-846 8082A	5/13/22	5/19/22 8:47	JEA
Aroclor-1232 [1]	ND	11	mg/Kg dry	400		SW-846 8082A	5/13/22	5/19/22 8:47	JEA
Aroclor-1242 [1]	ND	11	mg/Kg dry	400		SW-846 8082A	5/13/22	5/19/22 8:47	JEA
Aroclor-1248 [1]	ND	11	mg/Kg dry	400		SW-846 8082A	5/13/22	5/19/22 8:47	JEA
Aroclor-1254 [1]	ND	11	mg/Kg dry	400		SW-846 8082A	5/13/22	5/19/22 8:47	JEA
Aroclor-1260 [1]	ND	11	mg/Kg dry	400		SW-846 8082A	5/13/22	5/19/22 8:47	JEA
Aroclor-1262 [1]	ND	11	mg/Kg dry	400		SW-846 8082A	5/13/22	5/19/22 8:47	JEA
Aroclor-1268 [1]	ND	11	mg/Kg dry	400		SW-846 8082A	5/13/22	5/19/22 8:47	JEA
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
Decachlorobiphenyl [1]	*	30-150			S-01			5/19/22 8:47	
Decachlorobiphenyl [2]	*	30-150			S-01			5/19/22 8:47	
Tetrachloro-m-xylene [1]	*	30-150			S-01			5/19/22 8:47	
Tetrachloro-m-xylene [2]	*	30-150			S-01			5/19/22 8:47	

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Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E0834

Date Received: 5/12/2022

Field Sample #: Comp #1 (2-10ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E0834-01

Sample Matrix: Soil

Sample Flags: O-32

## Herbicides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [2]	ND	140	12	µg/kg dry	4		SW-846 8151A	5/25/22	5/29/22 10:10	JMB
2,4-DB [2]	ND	140	27	µg/kg dry	4		SW-846 8151A	5/25/22	5/29/22 10:10	JMB
2,4,5-TP (Silvex) [2]	ND	14	1.5	µg/kg dry	4		SW-846 8151A	5/25/22	5/29/22 10:10	JMB
2,4,5-T [2]	ND	14	1.9	µg/kg dry	4		SW-846 8151A	5/25/22	5/29/22 10:10	JMB
Dalapon [2]	ND	340	21	µg/kg dry	4		SW-846 8151A	5/25/22	5/29/22 10:10	JMB
Dicamba [2]	ND	14	1.9	µg/kg dry	4		SW-846 8151A	5/25/22	5/29/22 10:10	JMB
Dichloroprop [2]	ND	140	26	µg/kg dry	4		SW-846 8151A	5/25/22	5/29/22 10:10	JMB
MCPA [2]	ND	14000	2100	µg/kg dry	4		SW-846 8151A	5/25/22	5/29/22 10:10	JMB
MCPP [2]	ND	14000	1800	µg/kg dry	4		SW-846 8151A	5/25/22	5/29/22 10:10	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2,4-Dichlorophenylacetic acid [1]	566 *	30-150	S-12
2,4-Dichlorophenylacetic acid [2]	101	30-150	



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Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E0834

Date Received: 5/12/2022

Field Sample #: Comp #1 (2-10ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E0834-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	2600	570	mg/Kg dry	50		SW-846 8100 Modified	5/16/22	5/19/22 0:39	SFM
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	*		40-140		S-01			5/19/22 0:39	

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Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E0834

Date Received: 5/12/2022

Field Sample #: Comp #1 (2-10ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E0834-01

Sample Matrix: Soil

## Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.2	mg/Kg dry	1		SW-846 6010D	5/17/22	5/21/22 21:41	MJH
Arsenic	9.8	4.4	mg/Kg dry	1		SW-846 6010D	5/17/22	5/21/22 21:41	MJH
Barium	82	2.2	mg/Kg dry	1		SW-846 6010D	5/17/22	5/21/22 21:41	MJH
Beryllium	0.36	0.22	mg/Kg dry	1		SW-846 6010D	5/17/22	5/21/22 21:41	MJH
Cadmium	0.47	0.44	mg/Kg dry	1		SW-846 6010D	5/17/22	5/21/22 21:41	MJH
Chromium	24	0.89	mg/Kg dry	1		SW-846 6010D	5/17/22	5/21/22 21:41	MJH
Lead	170	0.67	mg/Kg dry	1	M-10	SW-846 6010D	5/17/22	5/21/22 21:41	MJH
Mercury	0.40	0.035	mg/Kg dry	1		SW-846 7471B	5/23/22	5/23/22 18:15	TDK
Nickel	24	0.89	mg/Kg dry	1		SW-846 6010D	5/17/22	5/21/22 21:41	MJH
Selenium	ND	4.4	mg/Kg dry	1		SW-846 6010D	5/17/22	5/21/22 21:41	MJH
Silver	ND	0.44	mg/Kg dry	1		SW-846 6010D	5/17/22	5/24/22 16:57	MJH
Thallium	ND	2.2	mg/Kg dry	1		SW-846 6010D	5/17/22	5/21/22 21:41	MJH
Vanadium	160	0.89	mg/Kg dry	1		SW-846 6010D	5/17/22	5/21/22 21:41	MJH
Zinc	160	0.89	mg/Kg dry	1		SW-846 6010D	5/17/22	5/21/22 21:41	MJH

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Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E0834

Date Received: 5/12/2022

Field Sample #: Comp #1 (2-10ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E0834-01

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.0		% Wt	1		SM 2540G	5/20/22	5/21/22 10:16	BLS
Flashpoint	> 212 °F		°F	1		SW-846 1010A-B	5/17/22	5/17/22 14:50	DET
pH @20.3°C	7.9		pH Units	1		SW-846 9045C	5/12/22	5/12/22 21:05	JEC
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	5/17/22	5/18/22 17:25	EC
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	5/17/22	5/18/22 16:10	EC
Specific conductance	9.7	2.0	µmhos/cm	1		SM21-23 2510B Modified	5/14/22	5/14/22 13:00	EC

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Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E0834

Date Received: 5/12/2022

Field Sample #: GP 3-5 (4-6ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E0834-02

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.038	0.14	0.013	mg/Kg dry	1	J	SW-846 8260D	5/13/22	5/13/22 10:35	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0014	0.00050	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Benzene	0.0011	0.0027	0.00075	mg/Kg dry	1	J	SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Bromobenzene	ND	0.0027	0.00050	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Bromochloromethane	ND	0.0027	0.0012	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Bromodichloromethane	ND	0.0027	0.00067	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Bromoform	ND	0.0027	0.00085	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Bromomethane	ND	0.014	0.0022	mg/Kg dry	1	V-34	SW-846 8260D	5/13/22	5/13/22 10:35	MFF
2-Butanone (MEK)	ND	0.055	0.0078	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
n-Butylbenzene	ND	0.0027	0.00080	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
sec-Butylbenzene	ND	0.0027	0.0013	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
tert-Butylbenzene	ND	0.0027	0.0011	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0014	0.00068	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Carbon Disulfide	0.017	0.014	0.0096	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Carbon Tetrachloride	ND	0.0027	0.0012	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Chlorobenzene	ND	0.0027	0.00081	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Chlorodibromomethane	ND	0.0014	0.00078	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Chloroethane	ND	0.027	0.0017	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Chloroform	ND	0.0055	0.00080	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Chloromethane	ND	0.014	0.0014	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
2-Chlorotoluene	ND	0.0027	0.00068	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
4-Chlorotoluene	ND	0.0027	0.00057	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0027	0.0012	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,2-Dibromoethane (EDB)	ND	0.0014	0.00092	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Dibromomethane	ND	0.0027	0.0010	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,2-Dichlorobenzene	ND	0.0027	0.00060	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,3-Dichlorobenzene	ND	0.0027	0.00068	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,4-Dichlorobenzene	ND	0.0027	0.00073	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.027	0.0014	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,1-Dichloroethane	ND	0.0027	0.00095	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,2-Dichloroethane	ND	0.0027	0.00090	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,1-Dichloroethylene	ND	0.0055	0.00097	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
cis-1,2-Dichloroethylene	ND	0.0027	0.00077	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
trans-1,2-Dichloroethylene	ND	0.0027	0.00092	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,2-Dichloropropane	ND	0.0027	0.00077	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,3-Dichloropropane	ND	0.0014	0.00071	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
2,2-Dichloropropane	ND	0.0027	0.0011	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,1-Dichloropropene	ND	0.0027	0.0013	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
cis-1,3-Dichloropropene	ND	0.0014	0.00069	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
trans-1,3-Dichloropropene	ND	0.0014	0.00068	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Diethyl Ether	ND	0.027	0.00098	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Diisopropyl Ether (DIPE)	ND	0.0014	0.00078	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,4-Dioxane	ND	0.14	0.049	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Ethylbenzene	ND	0.0027	0.00074	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E0834

Date Received: 5/12/2022

Field Sample #: GP 3-5 (4-6ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E0834-02

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0027	0.0010	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
2-Hexanone (MBK)	ND	0.027	0.0078	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Isopropylbenzene (Cumene)	ND	0.0027	0.00097	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0027	0.00077	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0055	0.00049	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Methylene Chloride	ND	0.027	0.0020	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.027	0.0057	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Naphthalene	ND	0.0055	0.00074	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
n-Propylbenzene	ND	0.0027	0.00065	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Styrene	ND	0.0027	0.00057	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,1,1,2-Tetrachloroethane	ND	0.0027	0.00077	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,1,2,2-Tetrachloroethane	ND	0.0014	0.00071	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Tetrachloroethylene	ND	0.0027	0.00091	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Tetrahydrofuran	ND	0.014	0.0046	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Toluene	ND	0.0027	0.00071	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,2,3-Trichlorobenzene	ND	0.0027	0.00074	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,2,4-Trichlorobenzene	ND	0.0027	0.00066	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,1,1-Trichloroethane	ND	0.0027	0.0011	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,1,2-Trichloroethane	ND	0.0027	0.00063	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Trichloroethylene	ND	0.0027	0.00090	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Trichlorofluoromethane (Freon 11)	ND	0.014	0.00066	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,2,3-Trichloropropane	ND	0.0027	0.0014	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,2,4-Trimethylbenzene	ND	0.0027	0.00091	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
1,3,5-Trimethylbenzene	ND	0.0027	0.00072	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
Vinyl Chloride	ND	0.014	0.00088	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
m+p Xylene	ND	0.0055	0.0018	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF
o-Xylene	ND	0.0027	0.00059	mg/Kg dry	1		SW-846 8260D	5/13/22	5/13/22 10:35	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	134 *	70-130	S-17
Toluene-d8	95.2	70-130	
4-Bromofluorobenzene	90.8	70-130	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E0834

Date Received: 5/12/2022

Field Sample #: GP 3-5 (4-6ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E0834-02

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.0		% Wt	1		SM 2540G	5/20/22	5/25/22 12:36	JLC

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### Sample Extraction Data

Prep Method: % Solids      Analytical Method: SM 2540G

Lab Number [Field ID]	Batch	Date
22E0834-01 [Comp #1 (2-10ft)]	B308891	05/20/22
22E0834-02 [GP 3-5 (4-6ft)]	B308891	05/20/22

SM21-23 2510B Modified

Lab Number [Field ID]	Batch	Initial [g]	Date
22E0834-01 [Comp #1 (2-10ft)]	B308429	1.00	05/14/22

SW-846 1010A-B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E0834-01 [Comp #1 (2-10ft)]	B308571	50.0	50.0	05/17/22

Prep Method: SW-846 3050B      Analytical Method: SW-846 6010D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E0834-01 [Comp #1 (2-10ft)]	B308621	1.54	50.0	05/17/22

Prep Method: SW-846 7471      Analytical Method: SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E0834-01 [Comp #1 (2-10ft)]	B309067	0.581	50.0	05/23/22

Prep Method: SW-846 3546      Analytical Method: SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E0834-01 [Comp #1 (2-10ft)]	B308354	10.0	10.0	05/13/22

Prep Method: SW-846 3546      Analytical Method: SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E0834-01 [Comp #1 (2-10ft)]	B308353	10.0	10.0	05/13/22

Prep Method: SW-846 3546      Analytical Method: SW-846 8100 Modified

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E0834-01 [Comp #1 (2-10ft)]	B308525	30.0	1.00	05/16/22

Prep Method: SW-846 8151      Analytical Method: SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
E0834-01 [Comp #1 (2-10ft)]	B309280	20.0	5.00	05/25/22

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**Sample Extraction Data**

Prep Method: SW-846 5035 Analytical Method: SW-846 8260D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E0834-02 [GP 3-5 (4-6ft)]	B308386	5.00	10.0	05/13/22

Prep Method: SW-846 3546 Analytical Method: SW-846 8270E

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E0834-01 [Comp #1 (2-10ft)]	B308526	30.1	1.00	05/16/22

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E0834-01 [Comp #1 (2-10ft)]	B308564	25.7	250	05/17/22

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E0834-01 [Comp #1 (2-10ft)]	B308563	25.7	250	05/17/22

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
22E0834-01 [Comp #1 (2-10ft)]	B308341	20.0		05/12/22



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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B308386 - SW-846 5035										
Blank (B308386-BLK1)				Prepared & Analyzed: 05/13/22						
Acetone	ND	0.10	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.010	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							

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**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B308386 - SW-846 5035</b>										
<b>Blank (B308386-BLK1)</b>										
Prepared & Analyzed: 05/13/22										
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0549		mg/Kg wet	0.0500		110	70-130			
Surrogate: Toluene-d8	0.0488		mg/Kg wet	0.0500		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0486		mg/Kg wet	0.0500		97.3	70-130			
<b>LCS (B308386-BS1)</b>										
Prepared & Analyzed: 05/13/22										
Acetone	0.228	0.10	mg/Kg wet	0.200		114	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0225	0.0010	mg/Kg wet	0.0200		113	70-130			
Benzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Bromobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
Bromochloromethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Bromodichloromethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Bromoform	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Bromomethane	0.0225	0.010	mg/Kg wet	0.0200		113	40-160			V-34 †
2-Butanone (MEK)	0.247	0.040	mg/Kg wet	0.200		124	40-160			V-36 †
n-Butylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
sec-Butylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
tert-Butylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0189	0.0010	mg/Kg wet	0.0200		94.3	70-130			
Carbon Disulfide	0.218	0.010	mg/Kg wet	0.200		109	70-130			
Carbon Tetrachloride	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Chlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
Chlorodibromomethane	0.0211	0.0010	mg/Kg wet	0.0200		105	70-130			
Chloroethane	0.0212	0.020	mg/Kg wet	0.0200		106	70-130			
Chloroform	0.0206	0.0040	mg/Kg wet	0.0200		103	70-130			
Chloromethane	0.0211	0.010	mg/Kg wet	0.0200		106	40-160			†
2-Chlorotoluene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
4-Chlorotoluene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
1,2-Dibromoethane (EDB)	0.0208	0.0010	mg/Kg wet	0.0200		104	70-130			
Bromomethane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
1,2-Dichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
1,3-Dichlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
1,4-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130			

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B308386 - SW-846 5035										
LCS (B308386-BS1) Prepared & Analyzed: 05/13/22										
Dichlorodifluoromethane (Freon 12)	0.0176	0.020	mg/Kg wet	0.0200		88.1	40-160			J †
1,1-Dichloroethane	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
1,2-Dichloroethane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1-Dichloroethylene	0.0207	0.0040	mg/Kg wet	0.0200		103	70-130			
cis-1,2-Dichloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130			
trans-1,2-Dichloroethylene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,2-Dichloropropane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,3-Dichloropropane	0.0211	0.0010	mg/Kg wet	0.0200		105	70-130			
2,2-Dichloropropane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,1-Dichloropropene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
cis-1,3-Dichloropropene	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130			
trans-1,3-Dichloropropene	0.0185	0.0010	mg/Kg wet	0.0200		92.6	70-130			
Diethyl Ether	0.0199	0.020	mg/Kg wet	0.0200		99.5	70-130			J
Diisopropyl Ether (DIPE)	0.0201	0.0010	mg/Kg wet	0.0200		101	70-130			
1,4-Dioxane	0.200	0.10	mg/Kg wet	0.200		100	40-160			†
Ethylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Hexachlorobutadiene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
2-Hexanone (MBK)	0.242	0.020	mg/Kg wet	0.200		121	40-160			V-36 †
Isopropylbenzene (Cumene)	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
p-Isopropyltoluene (p-Cymene)	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
ethyl tert-Butyl Ether (MTBE)	0.0199	0.0040	mg/Kg wet	0.0200		99.4	70-130			
Methylene Chloride	0.0200	0.020	mg/Kg wet	0.0200		100	70-130			
4-Methyl-2-pentanone (MIBK)	0.235	0.020	mg/Kg wet	0.200		118	40-160			†
Naphthalene	0.0206	0.0040	mg/Kg wet	0.0200		103	70-130			
n-Propylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
Styrene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,1,1,2-Tetrachloroethane	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
1,1,1,2,2-Tetrachloroethane	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130			
Tetrachloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130			
Tetrahydrofuran	0.0205	0.010	mg/Kg wet	0.0200		102	70-130			
Toluene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2,3-Trichlorobenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.5	70-130			
1,2,4-Trichlorobenzene	0.0182	0.0020	mg/Kg wet	0.0200		90.8	70-130			
1,1,1-Trichloroethane	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
1,1,2-Trichloroethane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
Trichloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Trichlorofluoromethane (Freon 11)	0.0218	0.010	mg/Kg wet	0.0200		109	70-130			
1,2,3-Trichloropropane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
1,2,4-Trimethylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
1,3,5-Trimethylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
Vinyl Chloride	0.0214	0.010	mg/Kg wet	0.0200		107	70-130			
m+p Xylene	0.0420	0.0040	mg/Kg wet	0.0400		105	70-130			
o-Xylene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0505		mg/Kg wet	0.0500		101	70-130			
Surrogate: Toluene-d8	0.0506		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0488		mg/Kg wet	0.0500		97.6	70-130			

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B308386 - SW-846 5035										
LCS Dup (B308386-BSD1)										
Prepared & Analyzed: 05/13/22										
Acetone	0.229	0.10	mg/Kg wet	0.200		115	40-160	0.534	20	†
tert-Amyl Methyl Ether (TAME)	0.0227	0.0010	mg/Kg wet	0.0200		114	70-130	0.972	20	
Benzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	0.794	20	
Bromobenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	0.964	20	
Bromochloromethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	0.00	20	
Bromodichloromethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	1.34	20	
Bromoform	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	1.89	20	
Bromomethane	0.0223	0.010	mg/Kg wet	0.0200		112	40-160	0.891	20	V-34 †
2-Butanone (MEK)	0.254	0.040	mg/Kg wet	0.200		127	40-160	2.83	20	V-36 †
n-Butylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	0.571	20	
sec-Butylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	0.495	20	
tert-Butylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	1.40	20	
tert-Butyl Ethyl Ether (TBEE)	0.0185	0.0010	mg/Kg wet	0.0200		92.6	70-130	1.82	20	
Carbon Disulfide	0.214	0.010	mg/Kg wet	0.200		107	70-130	2.06	20	
Carbon Tetrachloride	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	0.497	20	
Chlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.6	70-130	0.815	20	
Chlorodibromomethane	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130	0.0950	20	
Chloroethane	0.0210	0.020	mg/Kg wet	0.0200		105	70-130	0.853	20	
Chloroform	0.0205	0.0040	mg/Kg wet	0.0200		102	70-130	0.487	20	
Chloromethane	0.0208	0.010	mg/Kg wet	0.0200		104	40-160	1.53	20	†
Chlorotoluene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	0.481	20	
4-Chlorotoluene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	0.0966	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	1.10	20	
1,2-Dibromoethane (EDB)	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130	0.288	20	
Dibromomethane	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130	1.60	20	
1,2-Dichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130	0.101	20	
1,3-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130	0.821	20	
1,4-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	0.104	20	
Dichlorodifluoromethane (Freon 12)	0.0174	0.020	mg/Kg wet	0.0200		87.2	40-160	1.03	20	J †
1,1-Dichloroethane	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	0.0956	20	
1,2-Dichloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	0.494	20	
1,1-Dichloroethylene	0.0204	0.0040	mg/Kg wet	0.0200		102	70-130	1.07	20	
cis-1,2-Dichloroethylene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130	1.21	20	
trans-1,2-Dichloroethylene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	3.48	20	
1,2-Dichloropropane	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	1.48	20	
1,3-Dichloropropane	0.0213	0.0010	mg/Kg wet	0.0200		107	70-130	1.32	20	
2,2-Dichloropropane	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130	4.24	20	
1,1-Dichloropropene	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130	1.30	20	
cis-1,3-Dichloropropene	0.0211	0.0010	mg/Kg wet	0.0200		106	70-130	0.380	20	
trans-1,3-Dichloropropene	0.0186	0.0010	mg/Kg wet	0.0200		93.0	70-130	0.431	20	
Diethyl Ether	0.0200	0.020	mg/Kg wet	0.0200		100	70-130	0.701	20	
Diisopropyl Ether (DIPE)	0.0197	0.0010	mg/Kg wet	0.0200		98.7	70-130	1.91	20	
1,4-Dioxane	0.236	0.10	mg/Kg wet	0.200		118	40-160	16.2	20	V-16 †
Ethylbenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	0.587	20	
Hexachlorobutadiene	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130	2.36	20	
2-Hexanone (MBK)	0.247	0.020	mg/Kg wet	0.200		123	40-160	2.04	20	V-36 †
Isopropylbenzene (Cumene)	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	0.0992	20	
p-Isopropyltoluene (p-Cymene)	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	1.68	20	
Methyl tert-Butyl Ether (MTBE)	0.0198	0.0040	mg/Kg wet	0.0200		99.2	70-130	0.201	20	
Methylene Chloride	0.0199	0.020	mg/Kg wet	0.0200		99.5	70-130	0.501	20	J
4-Methyl-2-pentanone (MIBK)	0.240	0.020	mg/Kg wet	0.200		120	40-160	2.20	20	†
Naphthalene	0.0205	0.0040	mg/Kg wet	0.0200		102	70-130	0.584	20	

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**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B308386 - SW-846 5035										
LCS Dup (B308386-BSD1)					Prepared & Analyzed: 05/13/22					
n-Propylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	0.290	20	
Styrene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	0.381	20	
1,1,1,2-Tetrachloroethane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	0.970	20	
1,1,2,2-Tetrachloroethane	0.0216	0.0010	mg/Kg wet	0.0200		108	70-130	3.19	20	
Tetrachloroethylene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130	1.42	20	
Tetrahydrofuran	0.0206	0.010	mg/Kg wet	0.0200		103	70-130	0.682	20	
Toluene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	10.1	20	
1,2,3-Trichlorobenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	0.536	20	
1,2,4-Trichlorobenzene	0.0180	0.0020	mg/Kg wet	0.0200		89.9	70-130	0.996	20	
1,1,1-Trichloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	1.50	20	
1,1,2-Trichloroethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	1.66	20	
Trichloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130	0.800	20	
Trichlorofluoromethane (Freon 11)	0.0219	0.010	mg/Kg wet	0.0200		109	70-130	0.550	20	
1,2,3-Trichloropropane	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	1.87	20	
1,2,4-Trimethylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	1.86	20	
1,3,5-Trimethylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	0.675	20	
Vinyl Chloride	0.0212	0.010	mg/Kg wet	0.0200		106	70-130	0.563	20	
m+p Xylene	0.0420	0.0040	mg/Kg wet	0.0400		105	70-130	0.143	20	
o-Xylene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	0.195	20	
Surrogate: 1,2-Dichloroethane-d4	0.0495		mg/Kg wet	0.0500		99.0	70-130			
Surrogate: Toluene-d8	0.0503		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0489		mg/Kg wet	0.0500		97.9	70-130			

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**QUALITY CONTROL**
**Semivolatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B308526 - SW-846 3546</b>										
<b>Blank (B308526-BLK1)</b>				Prepared: 05/16/22 Analyzed: 05/18/22						
Biphenyl	ND	0.67	mg/Kg wet							
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							V-05
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							V-05
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							V-34
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							R-05
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
o-trobenzene	ND	0.34	mg/Kg wet							
Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							

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**QUALITY CONTROL**
**Semivolatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B308526 - SW-846 3546</b>										
<b>Blank (B308526-BLK1)</b>										
Prepared: 05/16/22 Analyzed: 05/18/22										
Phenanthrene	ND	0.17	mg/Kg wet							
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	3.57		mg/Kg wet	6.67		53.5	30-130			
Surrogate: Phenol-d6	3.50		mg/Kg wet	6.67		52.5	30-130			
Surrogate: Nitrobenzene-d5	1.76		mg/Kg wet	3.33		52.8	30-130			
Surrogate: 2-Fluorobiphenyl	2.31		mg/Kg wet	3.33		69.2	30-130			
Surrogate: 2,4,6-Tribromophenol	4.96		mg/Kg wet	6.67		74.4	30-130			
Surrogate: p-Terphenyl-d14	2.09		mg/Kg wet	3.33		62.8	30-130			
<b>LCS (B308526-BS1)</b>										
Prepared: 05/16/22 Analyzed: 05/18/22										
Biphenyl	1.15	0.67	mg/Kg wet	1.67		69.3	40-140			
Acenaphthene	1.02	0.17	mg/Kg wet	1.67		61.1	40-140			
Acenaphthylene	1.06	0.17	mg/Kg wet	1.67		63.8	40-140			
Acetophenone	0.935	0.34	mg/Kg wet	1.67		56.1	40-140			
Aniline	0.822	0.34	mg/Kg wet	1.67		49.3	40-140			V-05
Anthracene	1.15	0.17	mg/Kg wet	1.67		69.1	40-140			
Benzo(a)anthracene	1.09	0.17	mg/Kg wet	1.67		65.5	40-140			
Benzo(a)pyrene	1.13	0.17	mg/Kg wet	1.67		68.1	40-140			
Benzo(b)fluoranthene	1.16	0.17	mg/Kg wet	1.67		69.3	40-140			
Benzo(g,h,i)perylene	1.11	0.17	mg/Kg wet	1.67		66.9	40-140			
Benzo(k)fluoranthene	1.26	0.17	mg/Kg wet	1.67		75.6	40-140			
Bis(2-chloroethoxy)methane	0.958	0.34	mg/Kg wet	1.67		57.5	40-140			
Bis(2-chloroethyl)ether	0.727	0.34	mg/Kg wet	1.67		43.6	40-140			
Bis(2-chloroisopropyl)ether	0.713	0.34	mg/Kg wet	1.67		42.8	40-140			V-05
Bis(2-Ethylhexyl)phthalate	0.998	0.34	mg/Kg wet	1.67		59.9	40-140			
4-Bromophenylphenylether	1.17	0.34	mg/Kg wet	1.67		70.5	40-140			
Butylbenzylphthalate	0.946	0.34	mg/Kg wet	1.67		56.8	40-140			
4-Chloroaniline	0.941	0.66	mg/Kg wet	1.67		56.5	15-140			V-34 †
2-Chloronaphthalene	0.955	0.34	mg/Kg wet	1.67		57.3	40-140			
2-Chlorophenol	0.943	0.34	mg/Kg wet	1.67		56.6	30-130			
Chrysene	1.12	0.17	mg/Kg wet	1.67		67.2	40-140			
Dibenz(a,h)anthracene	1.14	0.17	mg/Kg wet	1.67		68.5	40-140			
Dibenzofuran	1.19	0.34	mg/Kg wet	1.67		71.2	40-140			
Di-n-butylphthalate	1.00	0.34	mg/Kg wet	1.67		60.0	40-140			
1,2-Dichlorobenzene	0.935	0.34	mg/Kg wet	1.67		56.1	40-140			
1,3-Dichlorobenzene	0.901	0.34	mg/Kg wet	1.67		54.1	40-140			
1,4-Dichlorobenzene	0.926	0.34	mg/Kg wet	1.67		55.6	40-140			
3,3-Dichlorobenzidine	0.961	0.17	mg/Kg wet	1.67		57.7	40-140			
2,4-Dichlorophenol	1.07	0.34	mg/Kg wet	1.67		64.4	30-130			
Diethylphthalate	0.965	0.34	mg/Kg wet	1.67		57.9	40-140			
2,4-Dimethylphenol	1.02	0.34	mg/Kg wet	1.67		61.4	30-130			
Dimethylphthalate	1.06	0.34	mg/Kg wet	1.67		63.7	40-140			
2,4-Dinitrophenol	0.572	0.66	mg/Kg wet	1.67		34.3	15-140			R-05, J †
2,4-Dinitrotoluene	1.16	0.34	mg/Kg wet	1.67		69.4	40-140			
2,6-Dinitrotoluene	1.20	0.34	mg/Kg wet	1.67		71.9	40-140			
Di-n-octylphthalate	0.958	0.34	mg/Kg wet	1.67		57.5	40-140			
1,2-Diphenylhydrazine/Azobenzene	0.964	0.34	mg/Kg wet	1.67		57.8	40-140			

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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B308526 - SW-846 3546										
LCS (B308526-BS1) Prepared: 05/16/22 Analyzed: 05/18/22										
Fluoranthene	1.11	0.17	mg/Kg wet	1.67		66.4	40-140			
Fluorene	1.15	0.17	mg/Kg wet	1.67		69.1	40-140			
Hexachlorobenzene	1.24	0.34	mg/Kg wet	1.67		74.1	40-140			
Hexachlorobutadiene	1.08	0.34	mg/Kg wet	1.67		64.9	40-140			
Hexachloroethane	0.828	0.34	mg/Kg wet	1.67		49.7	40-140			
Indeno(1,2,3-cd)pyrene	1.15	0.17	mg/Kg wet	1.67		68.8	40-140			
Isophorone	0.962	0.34	mg/Kg wet	1.67		57.7	40-140			
2-Methylnaphthalene	1.17	0.17	mg/Kg wet	1.67		70.1	40-140			
2-Methylphenol	0.972	0.34	mg/Kg wet	1.67		58.3	30-130			
3/4-Methylphenol	0.990	0.34	mg/Kg wet	1.67		59.4	30-130			
Naphthalene	1.02	0.17	mg/Kg wet	1.67		61.3	40-140			
Nitrobenzene	0.872	0.34	mg/Kg wet	1.67		52.3	40-140			
2-Nitrophenol	0.978	0.34	mg/Kg wet	1.67		58.7	30-130			
4-Nitrophenol	0.907	0.66	mg/Kg wet	1.67		54.4	15-140			†
Pentachlorophenol	0.917	0.34	mg/Kg wet	1.67		55.0	30-130			
Phenanthrene	1.15	0.17	mg/Kg wet	1.67		68.9	40-140			
Phenol	0.918	0.34	mg/Kg wet	1.67		55.1	15-140			†
Pyrene	1.07	0.17	mg/Kg wet	1.67		64.1	40-140			
Pyridine	0.514	0.34	mg/Kg wet	1.67		30.9	30-140			†
1,2,4-Trichlorobenzene	1.05	0.34	mg/Kg wet	1.67		63.1	40-140			
1,5-Trichlorophenol	1.17	0.34	mg/Kg wet	1.67		70.1	30-130			
2,4,6-Trichlorophenol	1.13	0.34	mg/Kg wet	1.67		67.7	30-130			
Surrogate: 2-Fluorophenol	4.20		mg/Kg wet	6.67		62.9	30-130			
Surrogate: Phenol-d6	4.14		mg/Kg wet	6.67		62.1	30-130			
Surrogate: Nitrobenzene-d5	1.86		mg/Kg wet	3.33		55.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.49		mg/Kg wet	3.33		74.8	30-130			
Surrogate: 2,4,6-Tribromophenol	5.52		mg/Kg wet	6.67		82.9	30-130			
Surrogate: p-Terphenyl-d14	2.34		mg/Kg wet	3.33		70.2	30-130			
LCS Dup (B308526-BS1) Prepared: 05/16/22 Analyzed: 05/18/22										
Biphenyl	1.21	0.67	mg/Kg wet	1.67		72.5	40-140	4.54	20	
Acenaphthene	1.05	0.17	mg/Kg wet	1.67		63.3	40-140	3.57	30	
Acenaphthylene	1.09	0.17	mg/Kg wet	1.67		65.2	40-140	2.26	30	
Acetophenone	1.02	0.34	mg/Kg wet	1.67		61.0	40-140	8.33	30	
Aniline	0.745	0.34	mg/Kg wet	1.67		44.7	40-140	9.83	30	V-05
Anthracene	1.17	0.17	mg/Kg wet	1.67		70.3	40-140	1.78	30	
Benzo(a)anthracene	1.11	0.17	mg/Kg wet	1.67		66.5	40-140	1.52	30	
Benzo(a)pyrene	1.13	0.17	mg/Kg wet	1.67		67.7	40-140	0.560	30	
Benzo(b)fluoranthene	1.16	0.17	mg/Kg wet	1.67		69.7	40-140	0.604	30	
Benzo(g,h,i)perylene	1.15	0.17	mg/Kg wet	1.67		69.2	40-140	3.35	30	
Benzo(k)fluoranthene	1.25	0.17	mg/Kg wet	1.67		74.8	40-140	1.06	30	
Bis(2-chloroethoxy)methane	1.00	0.34	mg/Kg wet	1.67		60.3	40-140	4.72	30	
Bis(2-chloroethyl)ether	0.799	0.34	mg/Kg wet	1.67		47.9	40-140	9.44	30	
Bis(2-chloroisopropyl)ether	0.829	0.34	mg/Kg wet	1.67		49.7	40-140	15.0	30	V-05
Bis(2-Ethylhexyl)phthalate	1.05	0.34	mg/Kg wet	1.67		63.3	40-140	5.55	30	
4-Bromophenylphenylether	1.19	0.34	mg/Kg wet	1.67		71.5	40-140	1.52	30	
Butylbenzylphthalate	0.937	0.34	mg/Kg wet	1.67		56.2	40-140	1.03	30	
4-Chloroaniline	0.869	0.66	mg/Kg wet	1.67		52.1	15-140	7.96	30	V-34 †
Chloronaphthalene	1.01	0.34	mg/Kg wet	1.67		60.8	40-140	5.86	30	
o-Chlorophenol	0.995	0.34	mg/Kg wet	1.67		59.7	30-130	5.37	30	
Chrysene	1.15	0.17	mg/Kg wet	1.67		68.8	40-140	2.32	30	
Dibenz(a,h)anthracene	1.13	0.17	mg/Kg wet	1.67		67.6	40-140	1.38	30	



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**QUALITY CONTROL**
**Semivolatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B308526 - SW-846 3546</b>										
<b>LCS Dup (B308526-BSI1)</b>					Prepared: 05/16/22 Analyzed: 05/18/22					
Dibenzofuran	1.21	0.34	mg/Kg wet	1.67		72.8	40-140	2.25	30	
Di-n-butylphthalate	1.06	0.34	mg/Kg wet	1.67		63.3	40-140	5.42	30	
1,2-Dichlorobenzene	1.02	0.34	mg/Kg wet	1.67		61.0	40-140	8.40	30	
1,3-Dichlorobenzene	1.01	0.34	mg/Kg wet	1.67		60.4	40-140	11.1	30	
1,4-Dichlorobenzene	1.02	0.34	mg/Kg wet	1.67		60.9	40-140	9.17	30	
3,3-Dichlorobenzidine	0.867	0.17	mg/Kg wet	1.67		52.0	40-140	10.3	30	
2,4-Dichlorophenol	1.09	0.34	mg/Kg wet	1.67		65.4	30-130	1.54	30	
Diethylphthalate	1.01	0.34	mg/Kg wet	1.67		60.5	40-140	4.46	30	
2,4-Dimethylphenol	1.06	0.34	mg/Kg wet	1.67		63.5	30-130	3.36	30	
Dimethylphthalate	1.05	0.34	mg/Kg wet	1.67		63.1	40-140	0.977	30	
2,4-Dinitrophenol	0.367	0.66	mg/Kg wet	1.67		22.0	15-140	43.6 *	30	R-05, J †
2,4-Dinitrotoluene	1.17	0.34	mg/Kg wet	1.67		70.4	40-140	1.37	30	
2,6-Dinitrotoluene	1.20	0.34	mg/Kg wet	1.67		72.0	40-140	0.167	30	
Di-n-octylphthalate	0.985	0.34	mg/Kg wet	1.67		59.1	40-140	2.71	30	
1,2-Diphenylhydrazine/Azobenzene	1.00	0.34	mg/Kg wet	1.67		60.2	40-140	4.03	30	
Fluoranthene	1.16	0.17	mg/Kg wet	1.67		69.6	40-140	4.73	30	
Fluorene	1.18	0.17	mg/Kg wet	1.67		70.7	40-140	2.23	30	
Hexachlorobenzene	1.24	0.34	mg/Kg wet	1.67		74.6	40-140	0.699	30	
Hexachlorobutadiene	1.15	0.34	mg/Kg wet	1.67		68.9	40-140	6.01	30	
Hexachloroethane	0.958	0.34	mg/Kg wet	1.67		57.5	40-140	14.6	30	
benzo(1,2,3-cd)pyrene	1.11	0.17	mg/Kg wet	1.67		66.5	40-140	3.40	30	
sophorone	1.08	0.34	mg/Kg wet	1.67		64.5	40-140	11.2	30	
2-Methylnaphthalene	1.24	0.17	mg/Kg wet	1.67		74.1	40-140	5.49	30	
2-Methylphenol	1.03	0.34	mg/Kg wet	1.67		61.9	30-130	5.89	30	
3/4-Methylphenol	1.01	0.34	mg/Kg wet	1.67		60.9	30-130	2.46	30	
Naphthalene	1.09	0.17	mg/Kg wet	1.67		65.5	40-140	6.56	30	
Nitrobenzene	0.969	0.34	mg/Kg wet	1.67		58.1	40-140	10.5	30	
2-Nitrophenol	1.07	0.34	mg/Kg wet	1.67		63.9	30-130	8.61	30	
4-Nitrophenol	0.904	0.66	mg/Kg wet	1.67		54.3	15-140	0.258	30	†
Pentachlorophenol	0.924	0.34	mg/Kg wet	1.67		55.4	30-130	0.760	30	
Phenanthrene	1.17	0.17	mg/Kg wet	1.67		70.2	40-140	1.75	30	
Phenol	0.952	0.34	mg/Kg wet	1.67		57.1	15-140	3.64	30	†
Pyrene	1.11	0.17	mg/Kg wet	1.67		66.7	40-140	4.07	30	
Pyridine	0.667	0.34	mg/Kg wet	1.67		40.0	30-140	25.8	30	†
1,2,4-Trichlorobenzene	1.14	0.34	mg/Kg wet	1.67		68.6	40-140	8.29	30	
2,4,5-Trichlorophenol	1.17	0.34	mg/Kg wet	1.67		70.5	30-130	0.455	30	
2,4,6-Trichlorophenol	1.14	0.34	mg/Kg wet	1.67		68.6	30-130	1.35	30	
Surrogate: 2-Fluorophenol	4.36		mg/Kg wet	6.67		65.4	30-130			
Surrogate: Phenol-d6	4.26		mg/Kg wet	6.67		63.8	30-130			
Surrogate: Nitrobenzene-d5	2.08		mg/Kg wet	3.33		62.5	30-130			
Surrogate: 2-Fluorobiphenyl	2.55		mg/Kg wet	3.33		76.6	30-130			
Surrogate: 2,4,6-Tribromophenol	5.38		mg/Kg wet	6.67		80.8	30-130			
Surrogate: p-Terphenyl-d14	2.34		mg/Kg wet	3.33		70.3	30-130			

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**QUALITY CONTROL**
**Organochloride Pesticides by GC/ECD - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B308354 - SW-846 3546</b>										
<b>Blank (B308354-BLK1)</b>										
Prepared: 05/13/22 Analyzed: 05/18/22										
Aldrin	ND	0.0050	mg/Kg wet							
Aldrin [2C]	ND	0.0050	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0040	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDE	ND	0.0040	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDT	ND	0.0040	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0040	mg/Kg wet							
Dieldrin	ND	0.0040	mg/Kg wet							
Dieldrin [2C]	ND	0.0040	mg/Kg wet							
dosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.156		mg/Kg wet	0.200		77.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.144		mg/Kg wet	0.200		71.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.133		mg/Kg wet	0.200		66.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.127		mg/Kg wet	0.200		63.7	30-150			

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## QUALITY CONTROL

## Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B308354 - SW-846 3546

## LCS (B308354-BS1)

Prepared: 05/13/22 Analyzed: 05/18/22

Aldrin	0.091	0.0050	mg/Kg wet	0.100		90.8	40-140			
Aldrin [2C]	0.081	0.0050	mg/Kg wet	0.100		81.0	40-140			
alpha-BHC	0.091	0.0050	mg/Kg wet	0.100		90.6	40-140			
alpha-BHC [2C]	0.072	0.0050	mg/Kg wet	0.100		72.3	40-140			
beta-BHC	0.087	0.0050	mg/Kg wet	0.100		86.8	40-140			
beta-BHC [2C]	0.080	0.0050	mg/Kg wet	0.100		79.5	40-140			
delta-BHC	0.089	0.0050	mg/Kg wet	0.100		89.4	40-140			
delta-BHC [2C]	0.081	0.0050	mg/Kg wet	0.100		80.8	40-140			
gamma-BHC (Lindane)	0.091	0.0020	mg/Kg wet	0.100		90.7	40-140			
gamma-BHC (Lindane) [2C]	0.076	0.0020	mg/Kg wet	0.100		76.3	40-140			
4,4'-DDD	0.096	0.0040	mg/Kg wet	0.100		96.0	40-140			
4,4'-DDD [2C]	0.092	0.0040	mg/Kg wet	0.100		91.7	40-140			
4,4'-DDE	0.095	0.0040	mg/Kg wet	0.100		95.5	40-140			
4,4'-DDE [2C]	0.090	0.0040	mg/Kg wet	0.100		90.0	40-140			
4,4'-DDT	0.094	0.0040	mg/Kg wet	0.100		93.5	40-140			
4,4'-DDT [2C]	0.087	0.0040	mg/Kg wet	0.100		86.8	40-140			
Dieldrin	0.092	0.0040	mg/Kg wet	0.100		91.6	40-140			
Dieldrin [2C]	0.088	0.0040	mg/Kg wet	0.100		87.5	40-140			
Endosulfan I	0.088	0.0050	mg/Kg wet	0.100		87.9	40-140			
Endosulfan I [2C]	0.078	0.0050	mg/Kg wet	0.100		77.5	40-140			
Endosulfan II	0.085	0.0080	mg/Kg wet	0.100		84.8	40-140			
Endosulfan II [2C]	0.082	0.0080	mg/Kg wet	0.100		82.2	40-140			
Endosulfan Sulfate	0.073	0.0080	mg/Kg wet	0.100		73.1	40-140			
Endosulfan Sulfate [2C]	0.075	0.0080	mg/Kg wet	0.100		75.3	40-140			
Endrin	0.086	0.0080	mg/Kg wet	0.100		86.5	40-140			
Endrin [2C]	0.086	0.0080	mg/Kg wet	0.100		86.0	40-140			
Endrin Ketone	0.088	0.0080	mg/Kg wet	0.100		88.4	40-140			
Endrin Ketone [2C]	0.081	0.0080	mg/Kg wet	0.100		81.2	40-140			
Heptachlor	0.094	0.0050	mg/Kg wet	0.100		94.1	40-140			
Heptachlor [2C]	0.079	0.0050	mg/Kg wet	0.100		78.7	40-140			
Heptachlor Epoxide	0.089	0.0050	mg/Kg wet	0.100		88.8	40-140			
Heptachlor Epoxide [2C]	0.082	0.0050	mg/Kg wet	0.100		81.9	40-140			
Hexachlorobenzene	0.084	0.0060	mg/Kg wet	0.100		84.4	40-140			
Hexachlorobenzene [2C]	0.073	0.0060	mg/Kg wet	0.100		73.3	40-140			
Methoxychlor	0.082	0.050	mg/Kg wet	0.100		82.0	40-140			
Methoxychlor [2C]	0.081	0.050	mg/Kg wet	0.100		81.2	40-140			
Surrogate: Decachlorobiphenyl	0.150		mg/Kg wet	0.200		75.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.123		mg/Kg wet	0.200		61.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.154		mg/Kg wet	0.200		77.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.122		mg/Kg wet	0.200		60.9	30-150			

## LCS Dup (B308354-BS1)

Prepared: 05/13/22 Analyzed: 05/18/22

Aldrin	0.082	0.0050	mg/Kg wet	0.100		82.2	40-140	9.95	30	
Aldrin [2C]	0.081	0.0050	mg/Kg wet	0.100		81.2	40-140	0.268	30	
alpha-BHC	0.078	0.0050	mg/Kg wet	0.100		78.1	40-140	14.8	30	
alpha-BHC [2C]	0.075	0.0050	mg/Kg wet	0.100		74.6	40-140	3.11	30	
beta-BHC	0.079	0.0050	mg/Kg wet	0.100		78.5	40-140	9.99	30	
beta-BHC [2C]	0.079	0.0050	mg/Kg wet	0.100		78.7	40-140	1.08	30	
delta-BHC	0.081	0.0050	mg/Kg wet	0.100		81.2	40-140	9.66	30	
delta-BHC [2C]	0.079	0.0050	mg/Kg wet	0.100		79.2	40-140	1.94	30	
gamma-BHC (Lindane)	0.079	0.0020	mg/Kg wet	0.100		79.4	40-140	13.3	30	
gamma-BHC (Lindane) [2C]	0.078	0.0020	mg/Kg wet	0.100		77.8	40-140	1.83	30	

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## QUALITY CONTROL

## Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B308354 - SW-846 3546										
LCS Dup (B308354-BS01) Prepared: 05/13/22 Analyzed: 05/18/22										
4,4'-DDD	0.092	0.0040	mg/Kg wet	0.100		91.9	40-140	4.35	30	
4,4'-DDD [2C]	0.088	0.0040	mg/Kg wet	0.100		87.7	40-140	4.46	30	
4,4'-DDE	0.091	0.0040	mg/Kg wet	0.100		91.1	40-140	4.65	30	
4,4'-DDE [2C]	0.086	0.0040	mg/Kg wet	0.100		86.2	40-140	4.31	30	
4,4'-DDT	0.088	0.0040	mg/Kg wet	0.100		88.3	40-140	5.70	30	
4,4'-DDT [2C]	0.082	0.0040	mg/Kg wet	0.100		81.6	40-140	6.23	30	
Dieldrin	0.086	0.0040	mg/Kg wet	0.100		86.4	40-140	5.80	30	
Dieldrin [2C]	0.083	0.0040	mg/Kg wet	0.100		83.5	40-140	4.71	30	
Endosulfan I	0.082	0.0050	mg/Kg wet	0.100		82.5	40-140	6.40	30	
Endosulfan I [2C]	0.077	0.0050	mg/Kg wet	0.100		77.3	40-140	0.324	30	
Endosulfan II	0.080	0.0080	mg/Kg wet	0.100		80.5	40-140	5.20	30	
Endosulfan II [2C]	0.078	0.0080	mg/Kg wet	0.100		78.1	40-140	5.07	30	
Endosulfan Sulfate	0.067	0.0080	mg/Kg wet	0.100		67.5	40-140	8.03	30	
Endosulfan Sulfate [2C]	0.070	0.0080	mg/Kg wet	0.100		70.0	40-140	7.35	30	
Endrin	0.083	0.0080	mg/Kg wet	0.100		82.5	40-140	4.70	30	
Endrin [2C]	0.082	0.0080	mg/Kg wet	0.100		81.7	40-140	5.12	30	
Endrin Ketone	0.085	0.0080	mg/Kg wet	0.100		84.6	40-140	4.42	30	
Endrin Ketone [2C]	0.077	0.0080	mg/Kg wet	0.100		77.1	40-140	5.25	30	
Heptachlor	0.083	0.0050	mg/Kg wet	0.100		83.4	40-140	12.0	30	
Heptachlor [2C]	0.079	0.0050	mg/Kg wet	0.100		79.3	40-140	0.799	30	
Heptachlor Epoxide	0.082	0.0050	mg/Kg wet	0.100		82.1	40-140	7.86	30	
Heptachlor Epoxide [2C]	0.079	0.0050	mg/Kg wet	0.100		79.3	40-140	3.23	30	
Hexachlorobenzene	0.077	0.0060	mg/Kg wet	0.100		76.8	40-140	9.43	30	
Hexachlorobenzene [2C]	0.076	0.0060	mg/Kg wet	0.100		76.1	40-140	3.73	30	
Methoxychlor	0.077	0.050	mg/Kg wet	0.100		77.2	40-140	5.93	30	
Methoxychlor [2C]	0.077	0.050	mg/Kg wet	0.100		76.7	40-140	5.68	30	
Surrogate: Decachlorobiphenyl	0.143		mg/Kg wet	0.200		71.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.121		mg/Kg wet	0.200		60.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.136		mg/Kg wet	0.200		68.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.129		mg/Kg wet	0.200		64.4	30-150			

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## QUALITY CONTROL

## Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B308353 - SW-846 3546</b>										
<b>Blank (B308353-BLK1)</b>										
Prepared: 05/13/22 Analyzed: 05/17/22										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.194		mg/Kg wet	0.200		97.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.193		mg/Kg wet	0.200		96.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.159		mg/Kg wet	0.200		79.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.141		mg/Kg wet	0.200		70.5	30-150			
<b>LCS (B308353-BS1)</b>										
Prepared: 05/13/22 Analyzed: 05/17/22										
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		73.4	40-140			
Aroclor-1016 [2C]	0.15	0.020	mg/Kg wet	0.200		75.4	40-140			
Aroclor-1260	0.16	0.020	mg/Kg wet	0.200		81.8	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.2	40-140			
Surrogate: Decachlorobiphenyl	0.196		mg/Kg wet	0.200		98.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.195		mg/Kg wet	0.200		97.5	30-150			
Surrogate: Tetrachloro-m-xylene	0.166		mg/Kg wet	0.200		82.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.148		mg/Kg wet	0.200		74.1	30-150			
<b>LCS Dup (B308353-BSD1)</b>										
Prepared: 05/13/22 Analyzed: 05/17/22										
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		73.9	40-140	0.797	30	
Aroclor-1016 [2C]	0.15	0.020	mg/Kg wet	0.200		76.0	40-140	0.847	30	
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		83.2	40-140	1.70	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		82.1	40-140	2.41	30	
Surrogate: Decachlorobiphenyl	0.195		mg/Kg wet	0.200		97.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.195		mg/Kg wet	0.200		97.5	30-150			
Surrogate: Tetrachloro-m-xylene	0.163		mg/Kg wet	0.200		81.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.147		mg/Kg wet	0.200		73.5	30-150			

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**QUALITY CONTROL**
**Herbicides by GC/ECD - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B309280 - SW-846 8151</b>										
<b>Blank (B309280-BLK1)</b>										
Prepared: 05/25/22 Analyzed: 05/29/22										
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							V-06
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	64.0		µg/kg wet	95.2		67.2	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	64.1		µg/kg wet	95.2		67.3	30-150			
<b>LCS (B309280-BS1)</b>										
Prepared: 05/25/22 Analyzed: 05/29/22										
2,4-D	95.0	25	µg/kg wet	125		76.0	40-140			
2,4-D [2C]	102	25	µg/kg wet	125		81.2	40-140			
2,4-DB	73.9	25	µg/kg wet	125		59.1	40-140			
2,4-DB [2C]	73.7	25	µg/kg wet	125		58.9	40-140			
2,4,5-TP (Silvex)	9.50	2.5	µg/kg wet	12.5		76.0	40-140			
2,4,5-TP (Silvex) [2C]	10.3	2.5	µg/kg wet	12.5		82.8	40-140			
2,4,5-T	9.04	2.5	µg/kg wet	12.5		72.3	40-140			
2,4,5-T [2C]	9.49	2.5	µg/kg wet	12.5		75.9	40-140			
Dalapon	149	62	µg/kg wet	312		47.6	40-140			
Dalapon [2C]	148	62	µg/kg wet	312		47.5	40-140			
Dicamba	9.12	2.5	µg/kg wet	12.5		72.9	40-140			
Dicamba [2C]	9.86	2.5	µg/kg wet	12.5		78.9	40-140			
Dichloroprop	100	25	µg/kg wet	125		80.2	40-140			
Dichloroprop [2C]	103	25	µg/kg wet	125		82.4	40-140			
MCPA	10800	2500	µg/kg wet	12500		86.2	40-140			
MCPA [2C]	9010	2500	µg/kg wet	12500		72.1	40-140			
MCPP	13000	2500	µg/kg wet	12500		104	40-140			V-06
MCPP [2C]	9770	2500	µg/kg wet	12500		78.1	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	70.7		µg/kg wet	100		70.7	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	73.4		µg/kg wet	100		73.4	30-150			

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**QUALITY CONTROL**
**Herbicides by GC/ECD - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B309280 - SW-846 8151</b>										
<b>LCS Dup (B309280-BSD1)</b>										
Prepared: 05/25/22 Analyzed: 05/29/22										
2,4-D	95.8	25	µg/kg wet	125		76.6	40-140	0.837	30	
2,4-D [2C]	103	25	µg/kg wet	125		82.2	40-140	1.21	30	
2,4-DB	73.5	25	µg/kg wet	125		58.8	40-140	0.615	30	
2,4-DB [2C]	74.7	25	µg/kg wet	125		59.8	40-140	1.41	30	
2,4,5-TP (Silvex)	9.42	2.5	µg/kg wet	12.5		75.4	40-140	0.864	30	
2,4,5-TP (Silvex) [2C]	10.4	2.5	µg/kg wet	12.5		83.4	40-140	0.806	30	
2,4,5-T	8.96	2.5	µg/kg wet	12.5		71.7	40-140	0.842	30	
2,4,5-T [2C]	9.59	2.5	µg/kg wet	12.5		76.8	40-140	1.14	30	
Dalapon	149	62	µg/kg wet	312		47.8	40-140	0.288	30	
Dalapon [2C]	149	62	µg/kg wet	312		47.7	40-140	0.427	30	
Dicamba	9.75	2.5	µg/kg wet	12.5		78.0	40-140	6.66	30	
Dicamba [2C]	9.97	2.5	µg/kg wet	12.5		79.7	40-140	1.09	30	
Dichloroprop	101	25	µg/kg wet	125		80.9	40-140	0.908	30	
Dichloroprop [2C]	104	25	µg/kg wet	125		83.4	40-140	1.20	30	
MCPA	10800	2500	µg/kg wet	12500		86.4	40-140	0.225	30	
MCPA [2C]	9110	2500	µg/kg wet	12500		72.9	40-140	1.11	30	
MCPP	13300	2500	µg/kg wet	12500		106	40-140	1.59	30	V-06
MCPP [2C]	9870	2500	µg/kg wet	12500		78.9	40-140	0.995	30	
Surrogate: 2,4-Dichlorophenylacetic acid	71.3		µg/kg wet	100		71.3	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid ]	74.1		µg/kg wet	100		74.1	30-150			

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**QUALITY CONTROL**
**Petroleum Hydrocarbons Analyses - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B308525 - SW-846 3546</b>										
<b>Blank (B308525-BLK1)</b>										
					Prepared: 05/16/22 Analyzed: 05/18/22					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.50		mg/Kg wet	3.33		74.9	40-140			
<b>LCS (B308525-BS1)</b>										
					Prepared: 05/16/22 Analyzed: 05/18/22					
TPH (C9-C36)	24.2	8.3	mg/Kg wet	33.3		72.7	40-140			
Surrogate: 2-Fluorobiphenyl	2.22		mg/Kg wet	3.33		66.6	40-140			
<b>LCS Dup (B308525-BSD1)</b>										
					Prepared: 05/16/22 Analyzed: 05/18/22					
TPH (C9-C36)	26.6	8.3	mg/Kg wet	33.3		79.8	40-140	9.25	30	
Surrogate: 2-Fluorobiphenyl	2.41		mg/Kg wet	3.33		72.2	40-140			



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## QUALITY CONTROL

## Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B308621 - SW-846 3050B</b>										
<b>Blank (B308621-BLK1)</b> Prepared: 05/17/22 Analyzed: 05/24/22										
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	3.3	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.33	mg/Kg wet							
Chromium	ND	0.66	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.66	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.66	mg/Kg wet							
Zinc	ND	0.66	mg/Kg wet							
<b>LCS (B308621-BS1)</b> Prepared: 05/17/22 Analyzed: 05/24/22										
Antimony	85.7	4.9	mg/Kg wet	99.5		86.1	2.5-209			
Arsenic	141	9.8	mg/Kg wet	140		101	82.9-117.9			
Barium	212	4.9	mg/Kg wet	202		105	81.2-118.3			
Beryllium	45.6	0.49	mg/Kg wet	42.6		107	81-119			
Cadmium	95.5	0.98	mg/Kg wet	97.9		97.6	80-119.5			
Chromium	59.0	2.0	mg/Kg wet	60.4		97.6	80.3-119.7			
Lead	57.7	1.5	mg/Kg wet	56.7		102	82.9-116.9			
Nickel	153	2.0	mg/Kg wet	151		101	79.5-121.2			
Selenium	37.4	9.8	mg/Kg wet	35.5		105	77.5-122.3			
Silver	21.4	0.98	mg/Kg wet	20.4		105	79.4-121.1			
Thallium	71.8	4.9	mg/Kg wet	69.3		104	79.4-120.6			
Vanadium	45.3	2.0	mg/Kg wet	44.9		101	78-121.8			
Zinc	182	2.0	mg/Kg wet	186		98.0	79-121			
<b>LCS Dup (B308621-BS1)</b> Prepared: 05/17/22 Analyzed: 05/24/22										
Antimony	91.0	5.0	mg/Kg wet	99.5		91.5	2.5-209	6.02	30	
Arsenic	144	10	mg/Kg wet	140		103	82.9-117.9	1.83	30	
Barium	215	5.0	mg/Kg wet	202		107	81.2-118.3	1.69	20	
Beryllium	46.5	0.50	mg/Kg wet	42.6		109	81-119	2.06	30	
Cadmium	99.4	1.0	mg/Kg wet	97.9		101	80-119.5	3.96	20	
Chromium	61.6	2.0	mg/Kg wet	60.4		102	80.3-119.7	4.39	30	
Lead	58.6	1.5	mg/Kg wet	56.7		103	82.9-116.9	1.58	30	
Nickel	155	2.0	mg/Kg wet	151		102	79.5-121.2	1.10	30	
Selenium	38.9	10	mg/Kg wet	35.5		109	77.5-122.3	3.75	30	
Silver	22.1	1.0	mg/Kg wet	20.4		108	79.4-121.1	3.16	30	
Thallium	75.5	5.0	mg/Kg wet	69.3		109	79.4-120.6	5.01	30	
Vanadium	47.2	2.0	mg/Kg wet	44.9		105	78-121.8	4.12	30	
Zinc	183	2.0	mg/Kg wet	186		98.4	79-121	0.384	30	

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**QUALITY CONTROL**
**Metals Analyses (Total) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B308621 - SW-846 3050B</b>										
<b>Reference (B308621-SRM1) MRL Check</b>				Prepared: 05/17/22 Analyzed: 05/24/22						
Lead	0.640	0.50	mg/Kg wet	0.498		129	* 80-120			M-10
<b>Batch B309067 - SW-846 7471</b>										
<b>Blank (B309067-BLK1)</b>				Prepared & Analyzed: 05/23/22						
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B309067-BS1)</b>				Prepared & Analyzed: 05/23/22						
Mercury	14.4	0.73	mg/Kg wet	16.5		87.5	74.5-124.8			
<b>LCS Dup (B309067-BSD1)</b>				Prepared & Analyzed: 05/23/22						
Mercury	14.8	0.74	mg/Kg wet	16.5		89.9	74.5-124.8	2.70	20	

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**QUALITY CONTROL**

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B308341 - SW-846 9045C</b>									
<b>LCS (B308341-BS1)</b>				Prepared & Analyzed: 05/12/22					
pH	5.98		pH Units	6.00		99.6	90-110		
<b>LCS (B308341-BS2)</b>				Prepared & Analyzed: 05/12/22					
pH	5.98		pH Units	6.00		99.7	90-110		
<b>Batch B308429 - SM21-23 2510B Modified</b>									
<b>Blank (B308429-BLK1)</b>				Prepared: 05/14/22 Analyzed: 05/17/22					
Specific conductance	ND	2.0	µmhos/cm						
<b>LCS (B308429-BS1)</b>				Prepared & Analyzed: 05/14/22					
Specific conductance	140		µmhos/cm	137		104	90-122		
<b>Duplicate (B308429-DUP1)</b>				<b>Source: 22E0834-01</b>		Prepared & Analyzed: 05/14/22			
Specific conductance	11	2.0	µmhos/cm			9.7	14.3	41.4	
<b>Batch B308563 - SW-846 9030A</b>									
<b>Blank (B308563-BLK1)</b>				Prepared: 05/17/22 Analyzed: 05/18/22					
Reactive Sulfide	ND	2.0	mg/Kg						
<b>LCS (B308563-BS1)</b>				Prepared: 05/17/22 Analyzed: 05/18/22					
Reactive Sulfide	12	2.0	mg/Kg	10.0		116	75.7-125		
<b>Batch B308564 - SW-846 9014</b>									
<b>Blank (B308564-BLK1)</b>				Prepared: 05/17/22 Analyzed: 05/18/22					
Reactive Cyanide	ND	0.40	mg/Kg						
<b>LCS (B308564-BS1)</b>				Prepared: 05/17/22 Analyzed: 05/18/22					
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	81.2-113		
<b>Batch B308571 - SW-846 1010A-B</b>									
<b>Blank (B308571-BLK1)</b>				Prepared & Analyzed: 05/17/22					
Flashpoint	> 212 °F		°F						
<b>LCS (B308571-BS1)</b>				Prepared & Analyzed: 05/17/22					
Flashpoint	81		°F	81.0		99.9	98.8-101		

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**QUALITY CONTROL**
**Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B308571 - SW-846 1010A-B

LCS Dup (B308571-BSD1)

Prepared &amp; Analyzed: 05/17/22

Flashpoint	81		°F	81.0		99.9	98.8-101	0.00	5	
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## BREAKDOWN REPORT

Lab Sample ID: S071717-PEM1 Analyzed: 05/17/2022

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	10.34
Endrin [1]	9.07

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	9.14
Endrin [2]	8.48

## BREAKDOWN REPORT

Lab Sample ID: S071717-PEM2 Analyzed: 05/17/2022

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	9.87
Endrin [1]	8.21

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	8.94
Endrin [2]	8.13

## BREAKDOWN REPORT

Lab Sample ID: S071717-PEM3 Analyzed: 05/18/2022

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	8.54
Endrin [1]	9.91

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## BREAKDOWN REPORT

Lab Sample ID: S071717-PEM3 Analyzed: 05/18/2022

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	7.76
Endrin [2]	9.87

## BREAKDOWN REPORT

Lab Sample ID: S071717-PEM4 Analyzed: 05/18/2022

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	8.33
Endrin [1]	9.25

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	7.59
Endrin [2]	9.54

## BREAKDOWN REPORT

Lab Sample ID: S071717-PEM5 Analyzed: 05/18/2022

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	7.27
Endrin [1]	9.94

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	6.53
Endrin [2]	9.61

## BREAKDOWN REPORT

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## BREAKDOWN REPORT

Lab Sample ID: S071799-PEM1 Analyzed: 05/22/2022

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	2.02
Endrin [1]	1.49

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.65
Endrin [2]	2.06

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*SW-846 8081B*

**Comp #1 (2-10ft)**

Lab Sample ID: 22E0834-01      Date(s) Analyzed: 05/22/2022    05/22/2022  
 Instrument ID (1): ECD6A      Instrument ID (2): ECD6B  
 GC Column (1):                      ID:                      (mm)      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.181	0.000	0.000	28	
	2	7.190	0.000	0.000	34	15.9
4,4'-DDE	1	6.742	0.000	0.000	3.2	
	2	6.763	0.000	0.000	2.7	16.9
4,4'-DDT	1	7.392	0.000	0.000	1400	
	2	7.427	0.000	0.000	1400	0.0
Dieldrin	1	6.957	0.000	0.000	7.8	
	2	6.867	0.000	0.000	7.1	9.4



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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*SW-846 8082A*

LCS

Lab Sample ID: B308353-BS1      Date(s) Analyzed: 05/17/2022    05/17/2022  
 Instrument ID (1): ECD1      Instrument ID (2): ECD1  
 GC Column (1):                      ID:                      (mm)      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.15	
	2	0.000	0.000	0.000	0.15	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.16	
	2	0.000	0.000	0.000	0.16	0.0

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*SW-846 8082A*

LCS Dup

Lab Sample ID: B308353-BSD1 Date(s) Analyzed: 05/17/2022 05/17/2022

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.15	
	2	0.000	0.000	0.000	0.15	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.17	
	2	0.000	0.000	0.000	0.16	6.1

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*SW-846 8081B*

LCS

Lab Sample ID: B308354-BS1      Date(s) Analyzed: 05/18/2022    05/18/2022  
 Instrument ID (1): ECD2      Instrument ID (2): ECD2  
 GC Column (1):                      ID:                      (mm)      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.764	0.000	0.000	0.096	
	2	7.543	0.000	0.000	0.092	4.3
4,4'-DDE	1	7.298	0.000	0.000	0.095	
	2	7.100	0.000	0.000	0.090	6.5
4,4'-DDT	1	7.978	0.000	0.000	0.094	
	2	7.784	0.000	0.000	0.087	7.7
Aldrin	1	6.608	0.000	0.000	0.091	
	2	6.331	0.000	0.000	0.081	11.6
alpha-BHC	1	5.828	0.000	0.000	0.091	
	2	5.597	0.000	0.000	0.072	23.3
beta-BHC	1	6.105	0.000	0.000	0.087	
	2	5.887	0.000	0.000	0.080	8.4
delta-BHC	1	6.235	0.000	0.000	0.089	
	2	6.086	0.000	0.000	0.081	9.4
Dieldrin	1	7.545	0.000	0.000	0.092	
	2	7.220	0.000	0.000	0.088	4.4
Endosulfan I	1	7.362	0.000	0.000	0.088	
	2	7.014	0.000	0.000	0.078	12.0
Endosulfan II	1	7.903	0.000	0.000	0.085	
	2	7.624	0.000	0.000	0.082	3.6
Endosulfan Sulfate	1	8.494	0.000	0.000	0.073	
	2	8.083	0.000	0.000	0.075	2.7
Endrin	1	7.729	0.000	0.000	0.086	
	2	7.452	0.000	0.000	0.086	1.2
Endrin Ketone	1	8.668	0.000	0.000	0.088	
	2	8.445	0.000	0.000	0.081	8.3
gamma-BHC (Lindane)	1	6.048	0.000	0.000	0.091	
	2	5.824	0.000	0.000	0.076	18.0
Heptachlor	1	6.387	0.000	0.000	0.094	
	2	6.110	0.000	0.000	0.079	17.3
Heptachlor Epoxide	1	7.059	0.000	0.000	0.089	

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*SW-846 8081B*

LCS

Lab Sample ID: B308354-BS1      Date(s) Analyzed: 05/18/2022    05/18/2022  
 Instrument ID (1): ECD2      Instrument ID (2): ECD2  
 GC Column (1):                      ID:                      (mm)      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	6.731	0.000	0.000	0.082	8.2
Hexachlorobenzene	1	5.710	0.000	0.000	0.084	
	2	5.509	0.000	0.000	0.073	14.0
Methoxychlor	1	8.309	0.000	0.000	0.082	
	2	8.301	0.000	0.000	0.081	1.2

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*SW-846 8081B*

LCS Dup

Lab Sample ID: B308354-BSD1      Date(s) Analyzed: 05/18/2022    05/18/2022  
 Instrument ID (1): ECD2      Instrument ID (2): ECD2  
 GC Column (1):      ID:      (mm)      GC Column (2):      ID:      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.765	0.000	0.000	0.092	
	2	7.544	0.000	0.000	0.088	4.4
4,4'-DDE	1	7.299	0.000	0.000	0.091	
	2	7.101	0.000	0.000	0.086	5.7
4,4'-DDT	1	7.980	0.000	0.000	0.088	
	2	7.785	0.000	0.000	0.082	7.1
Aldrin	1	6.609	0.000	0.000	0.082	
	2	6.331	0.000	0.000	0.081	1.2
alpha-BHC	1	5.828	0.000	0.000	0.078	
	2	5.597	0.000	0.000	0.075	3.9
beta-BHC	1	6.106	0.000	0.000	0.079	
	2	5.887	0.000	0.000	0.079	0.0
delta-BHC	1	6.235	0.000	0.000	0.081	
	2	6.086	0.000	0.000	0.079	2.5
Dieldrin	1	7.547	0.000	0.000	0.086	
	2	7.221	0.000	0.000	0.083	3.6
Endosulfan I	1	7.363	0.000	0.000	0.082	
	2	7.015	0.000	0.000	0.077	7.5
Endosulfan II	1	7.904	0.000	0.000	0.080	
	2	7.625	0.000	0.000	0.078	3.8
Endosulfan Sulfate	1	8.495	0.000	0.000	0.067	
	2	8.084	0.000	0.000	0.070	2.9
Endrin	1	7.730	0.000	0.000	0.083	
	2	7.453	0.000	0.000	0.082	1.2
Endrin Ketone	1	8.669	0.000	0.000	0.085	
	2	8.446	0.000	0.000	0.077	9.9
gamma-BHC (Lindane)	1	6.048	0.000	0.000	0.079	
	2	5.825	0.000	0.000	0.078	1.3
Heptachlor	1	6.388	0.000	0.000	0.083	
	2	6.110	0.000	0.000	0.079	4.9
Heptachlor Epoxide	1	7.060	0.000	0.000	0.082	

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*SW-846 8081B*

LCS Dup

Lab Sample ID: B308354-BSD1      Date(s) Analyzed: 05/18/2022    05/18/2022  
 Instrument ID (1): ECD2      Instrument ID (2): ECD2  
 GC Column (1):                      ID:                      (mm)      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	6.731	0.000	0.000	0.079	3.7
Hexachlorobenzene	1	5.711	0.000	0.000	0.077	
	2	5.509	0.000	0.000	0.076	1.3
Methoxychlor	1	8.310	0.000	0.000	0.077	
	2	8.301	0.000	0.000	0.077	0.0

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*SW-846 8151A*

LCS

Lab Sample ID: B309280-BS1      Date(s) Analyzed: 05/29/2022    05/29/2022  
 Instrument ID (1): ECD 8      Instrument ID (2): ECD 8  
 GC Column (1):                      ID:                      (mm)      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	17.286	0.000	0.000	9.04	
	2	17.126	0.000	0.000	9.49	5.3
2,4,5-TP (Silvex)	1	17.057	0.000	0.000	9.50	
	2	16.745	0.000	0.000	10.3	8.1
2,4-D	1	15.583	0.000	0.000	95.0	
	2	15.013	0.000	0.000	102	7.1
2,4-DB	1	17.644	0.000	0.000	73.9	
	2	17.478	0.000	0.000	73.7	0.4
Dalapon	1	5.455	0.000	0.000	149	
	2	4.915	0.000	0.000	148	1.3
Dicamba	1	13.332	0.000	0.000	9.12	
	2	12.688	0.000	0.000	9.86	8.0
Dichloroprop	1	15.049	0.000	0.000	100	
	2	14.303	0.000	0.000	103	3.0
MCPA	1	14.195	0.000	0.000	10800	
	2	13.562	0.000	0.000	9010	19.9
MCPP	1	13.840	0.000	0.000	13000	
	2	13.033	0.000	0.000	9770	28.4

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

*SW-846 8151A*

LCS Dup

Lab Sample ID: B309280-BSD1      Date(s) Analyzed: 05/29/2022    05/29/2022  
 Instrument ID (1): ECD 8      Instrument ID (2): ECD 8  
 GC Column (1):                      ID:                      (mm)      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	17.286	0.000	0.000	8.96	
	2	17.126	0.000	0.000	9.59	6.4
2,4,5-TP (Silvex)	1	17.057	0.000	0.000	9.42	
	2	16.745	0.000	0.000	10.4	10.1
2,4-D	1	15.583	0.000	0.000	95.8	
	2	15.012	0.000	0.000	103	7.0
2,4-DB	1	17.644	0.000	0.000	73.5	
	2	17.479	0.000	0.000	74.7	0.9
Dalapon	1	5.455	0.000	0.000	149	
	2	4.916	0.000	0.000	149	0.7
Dicamba	1	13.332	0.000	0.000	9.75	
	2	12.688	0.000	0.000	9.97	1.7
Dichloroprop	1	15.048	0.000	0.000	101	
	2	14.303	0.000	0.000	104	3.9
MCPA	1	14.195	0.000	0.000	10800	
	2	13.562	0.000	0.000	9110	18.8
MCPP	1	13.841	0.000	0.000	13300	
	2	13.033	0.000	0.000	9870	27.4



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**FLAG/QUALIFIER SUMMARY**

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
M-10	The reporting limit verification for the AIHA lead program is outside of control limits for this element. Any reported result at or near the detection limit may be biased on the high side.
O-32	A dilution was performed as part of the standard analytical procedure.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-11	Elevated reporting limit due to high concentration of target compounds.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
S-12	Surrogate recovery is outside of control limits on confirmatory column, but within control limits on primary column. Data validation is not affected.
S-17	Surrogate recovery is outside of control limits. Data validation is not affected since all associated results are less than the reporting limit and bias is on the high side.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-36	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<b>SW-846 1010A-B in Soil</b>	
Flashpoint	NY,NC,ME,VA
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AI,HA,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8081B in Soil</b>	
Aldrin	CT,NC,NH,NY,ME,VA
Aldrin [2C]	CT,NC,NH,NY,ME,VA
alpha-BHC	CT,NC,NH,NY,ME,VA
alpha-BHC [2C]	CT,NC,NH,NY,ME,VA
beta-BHC	CT,NC,NH,NY,ME,VA
beta-BHC [2C]	CT,NC,NH,NY,ME,VA
delta-BHC	CT,NC,NH,NY,ME,VA
delta-BHC [2C]	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane)	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane) [2C]	CT,NC,NH,NY,ME,VA
Chlordane	CT,NC,NH,NY,ME,VA
Chlordane [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDD	CT,NC,NH,NY,ME,VA
4,4'-DDD [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDE	CT,NC,NH,NY,ME,VA
4,4'-DDE [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDT	CT,NC,NH,NY,ME,VA
4,4'-DDT [2C]	CT,NC,NH,NY,ME,VA
Dieldrin	CT,NC,NH,NY,ME,VA
Dieldrin [2C]	CT,NC,NH,NY,ME,VA
Endosulfan I	CT,NC,NH,NY,ME,VA
Endosulfan I [2C]	CT,NC,NH,NY,ME,VA
Endosulfan II	CT,NC,NH,NY,ME,VA
Endosulfan II [2C]	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate [2C]	CT,NC,NH,NY,ME,VA
Endrin	CT,NC,NH,NY,ME,VA
Endrin [2C]	CT,NC,NH,NY,ME,VA

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## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<b>SW-846 8081B in Soil</b>	
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NC,NH,NY,ME,VA
Heptachlor [2C]	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide [2C]	CT,NC,NH,NY,ME,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NC,NH,NY,ME,VA
Methoxychlor [2C]	CT,NC,NH,NY,ME,VA
<b>SW-846 8081B in Water</b>	
Aldrin	CT,NC,NH,NY,ME,VA
Aldrin [2C]	CT,NC,NH,NY,ME,VA
alpha-BHC	CT,NC,NH,NY,ME,VA
alpha-BHC [2C]	CT,NC,NH,NY,ME,VA
beta-BHC	CT,NC,NH,NY,ME,VA
beta-BHC [2C]	CT,NC,NH,NY,ME,VA
delta-BHC	CT,NC,NH,NY,ME,VA
delta-BHC [2C]	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane)	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane) [2C]	CT,NC,NH,NY,ME,VA
Chlordane	CT,NC,NH,NY,ME,VA
Chlordane [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDD	CT,NC,NH,NY,ME,VA
4,4'-DDD [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDE	CT,NC,NH,NY,ME,VA
4,4'-DDE [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDT	CT,NC,NH,NY,ME,VA
4,4'-DDT [2C]	CT,NC,NH,NY,ME,VA
Dieldrin	CT,NC,NH,NY,ME,VA
Dieldrin [2C]	CT,NC,NH,NY,ME,VA
Endosulfan I	CT,NC,NH,NY,ME,VA
Endosulfan I [2C]	CT,NC,NH,NY,ME,VA
Endosulfan II	CT,NC,NH,NY,ME,VA
Endosulfan II [2C]	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate [2C]	CT,NC,NH,NY,ME,VA
Endrin	CT,NC,NH,NY,ME,VA
Endrin [2C]	CT,NC,NH,NY,ME,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NC,NH,NY,ME,VA
Heptachlor [2C]	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide [2C]	CT,NC,NH,NY,ME,VA
Hexachlorobenzene	NC

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<b>SW-846 8081B in Water</b>	
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NC,NH,NY,ME,VA
Methoxychlor [2C]	CT,NC,NH,NY,ME,VA
<b>SW-846 8082A in Soil</b>	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
<b>SW-846 8082A in Water</b>	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
<b>SW-846 8151A in Soil</b>	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT

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## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8151A in Soil</i>	
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
<i>SW-846 8151A in Water</i>	
2,4-D	ME,NC,NH,CT,NY,VA
2,4-D [2C]	ME,NC,NH,CT,NY,VA
2,4-DB	ME,NC,NH,CT,NY,VA
2,4-DB [2C]	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex)	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex) [2C]	ME,NC,NH,CT,NY,VA
2,4,5-T	ME,NC,NH,CT,NY,VA
2,4,5-T [2C]	ME,NC,NH,CT,NY,VA
Dalapon	ME,NC,NH,CT,NY,VA
Dalapon [2C]	ME,NC,NH,CT,NY,VA
Dicamba	ME,NC,NH,CT,NY,VA
Dicamba [2C]	ME,NC,NH,CT,NY,VA
Dichloroprop	ME,NC,NH,CT,NY,VA
Dichloroprop [2C]	ME,NC,NH,CT,NY,VA
MCPA	NC,CT
MCPA [2C]	NC,CT
MCPP	NC,CT
MCPP [2C]	NC,CT
<i>SW-846 8260D in Soil</i>	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260D in Soil</i>	
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NY
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NH,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	CT,NH,NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NH,NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
1,4-Dioxane	NY
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	CT,NH,NY,ME
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NH,NY
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
Naphthalene	NH,NY,ME
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NY
1,2,4-Trichlorobenzene	NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME

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## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<b>SW-846 8260D in Soil</b>	
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	CT,NH,NY,ME
1,3,5-Trimethylbenzene	CT,NH,NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME

**SW-846 8270E in Soil**

Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY,NH
Aniline	NY,NH
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine/Azobenzene	NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH

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**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270E in Soil</i>	
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022





I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_

**Pace**

Doc# 277 Rev 5 2017

**Pace**

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client CDW

Received By DK

Date 5/12/22

Time 1810

How were the samples received?

In Cooler 7

No Cooler \_\_\_\_\_

On Ice 7

No Ice \_\_\_\_\_

Direct from Sampling \_\_\_\_\_

Ambient \_\_\_\_\_

Melted Ice \_\_\_\_\_

Were samples within Temperature? 2-6°C 7

By Gun # 5

Actual Temp - 3.7

By Blank # \_\_\_\_\_

Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? NA

Were Samples Tampered with? NA

Was COC Relinquished? 7

Does Chain Agree With Samples? 7

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? 7

Were samples received within holding time? F

Did COC include all Client 7

Analysis 7

Sampler Name 7

pertinent Information? Project 7

ID's 7

Collection Dates/Times 7

Are Sample labels filled out and legible? 7

Are there Lab to Filters? F

Who was notified? \_\_\_\_\_

Are there Rushes? F

Who was notified? \_\_\_\_\_

Are there Short Holds? 7

Who was notified? Davies

Is there enough Volume? 7

Is there Headspace where applicable? 7

MS/MSD? F

Proper Media/Containers Used? 7

Is splitting samples required? F

Were trip blanks received? F

On COC? F

Do all samples have the proper pH? NA

Acid \_\_\_\_\_

Base \_\_\_\_\_

Vials	#	Containers	#	Containers	#	Containers	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	<u>4</u>
Meoh-	<u>1</u>	250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-	<u>2</u>	Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass	<u>1</u>	Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

#### Unused Media

Vials	#	Containers	#	Containers	#	Containers	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test, a Pace Analytical Laboratory

Project #: 22E0834

Project Location: 240 Beaver St., Waltham, MA

RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

22E0834-01 thru 22E0834-02

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A (X)	7470/7471 Hg CAM II B (X)	MassDEP VPH (GC/PID/FID) CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH (GC/MS) CAM IV C ( )	8081 Pesticides CAM V B (X)	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C (X)	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
----------	---	--

**Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

*I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.*

Signature: Tod E. KopyscinskiPosition: Laboratory DirectorPrinted Name: Tod E. KopyscinskiDate: 05/30/22

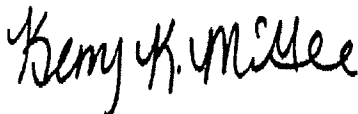
June 9, 2022

Alan Sundquist  
CDW Consultants, Inc.  
4 California Drive, Suite 301  
Framingham, MA 01760

Project Location: 240 Beaver St., Waltham, MA  
Client Job Number:  
Project Number: 1830.1  
Laboratory Work Order Number: 22E1819

Enclosed are results of analyses for samples as received by the laboratory on May 26, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kerry K. McGee  
Project Manager

## Table of Contents

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CDW Consultants, Inc.  
4 California Drive, Suite 301  
Framingham, MA 01760  
ATTN: Alan Sundquist

REPORT DATE: 6/9/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1830.1

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ANALYTICAL SUMMARY

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WORK ORDER NUMBER: 22E1819

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 240 Beaver St., Waltham, MA

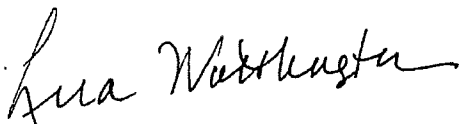
FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Comp #1 (2-10ft)	22E1819-01	Soil		SM 2540G SW-846 6010D	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington  
Technical Representative

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E1819

Date Received: 5/26/2022

Field Sample #: Comp #1 (2-10ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E1819-01

Sample Matrix: Soil

## Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.0		% Wt	1		SM 2540G	5/20/22	5/21/22 15:14	AV



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Project Location: 240 Beaver St., Waltham, MA

Sample Description:

Work Order: 22E1819

Date Received: 5/26/2022

Field Sample #: Comp #1 (2-10ft)

Sampled: 5/12/2022 12:00

Sample ID: 22E1819-01

Sample Matrix: Soil

## TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	0.90	0.10	mg/L	1		SW-846 6010D	5/30/22	5/31/22 19:33	ATP

---

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**Sample Extraction Data**

Prep Method: % Solids    Analytical Method: SM 2540G

Lab Number [Field ID]	Batch	Date
22E1819-01 [Comp #1 (2-10ft)]	B308891	05/20/22

Prep Method: SW-846 3010A    Analytical Method: SW-846 6010A    1311 batches were extracted on 5/27/2022 per SW-846 1311 in Batch B309426

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1819-01 [Comp #1 (2-10ft)]	B309545	50.0	50.0	05/30/22

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

## QUALITY CONTROL

## TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
<b>Batch B309545 - SW-846 3010A</b>								
<b>Blank (B309545-BLK1)</b>				Prepared: 05/30/22 Analyzed: 05/31/22				
Lead	ND	0.10	mg/L					
<b>LCS (B309545-BS1)</b>				Prepared: 05/30/22 Analyzed: 05/31/22				
Lead	0.492	0.10	mg/L	0.500	98.4	80-120		
<b>LCS Dup (B309545-BSD1)</b>				Prepared: 05/30/22 Analyzed: 05/31/22				
Lead	0.509	0.10	mg/L	0.500	102	80-120	3.29	20

---

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332**FLAG/QUALIFIER SUMMARY**

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.	
No results have been blank subtracted unless specified in the case narrative section.	

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**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
---------	----------------

**SW-846 6010D in Water**

Lead	NY,CT,ME,NC,NH,VA
------	-------------------

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

22E-0834



Phone: 413-525-2332  
Fax: 413-525-6405

Access CQC's and Support Requests

Company Name: **CDW CONSULTANTS**  
Address: **5 CAL. TOWN DR. FRAMINGHAM**  
Phone: **508-235-2657**  
Project Name: **WATNAM**  
Project Location: **240 BROAD ST. WATNAM**  
Project Number: **18301**  
Project Manager: **A. Smith**  
Pace Quote Name/Number:

Invoice Recipient:  
Sampled By: **A. Smith**

Sample Date/Time: **5/12/22 12:00**

Sample Location: **CP 3-5 (4-1) 18301**

Sample Description: **CP 3-5 (4-1) 18301**

Sample Matrix: **SLUDGE**

Sample Volume: **500 mL**

Sample Container: **500 mL**

Sample Label: **500 mL**

Sample ID: **500 mL**

Sample Date/Time: **5/12/22 12:00**

Sample Location: **CP 3-5 (4-1) 18301**

Sample Description: **CP 3-5 (4-1) 18301**

Sample Matrix: **SLUDGE**

Sample Volume: **500 mL**

Sample Container: **500 mL**

Sample Label: **500 mL**

Sample ID: **500 mL**

Sample Date/Time: **5/12/22 12:00**

Sample Location: **CP 3-5 (4-1) 18301**

Sample Description: **CP 3-5 (4-1) 18301**

Sample Matrix: **SLUDGE**

Sample Volume: **500 mL**

Sample Container: **500 mL**

Sample Label: **500 mL**

http://www.pacelabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street  
East Longmeadow, MA 01028

Requested Turnaround Time: ☒ 10-Day ☐ Due Date: ☐

Field Filtered Lab to Filter

Orthophosphate Samples

Field Filtered Lab to Filter

PCB ONLY

SOXHLET

NON SOXHLET

CLP Like Data Pkg Required: ☐

Excel ☒

Format: PDF ☒

Other: ☐

Email To: **CDW CONSULTANTS**

Fax To: **CDW CONSULTANTS**

Ending Date/Time: **5/12/22 12:00**

Starting Date/Time: **5/12/22 12:00**

Sample Volume: **500 mL**

Sample Container: **500 mL**

Sample Label: **500 mL**

Sample ID: **500 mL**

Sample Date/Time: **5/12/22 12:00**

Sample Location: **CP 3-5 (4-1) 18301**

Sample Description: **CP 3-5 (4-1) 18301**

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Sample Matrix: **SLUDGE**

Sample Volume: **500 mL**

Sample Container: **500 mL**

Sample Label: **500 mL**

Sample ID: **500 mL**

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Page 1 of 1

ANALYSIS REQUESTED

PCB ONLY

SOXHLET

NON SOXHLET

CLP Like Data Pkg Required: ☐

Excel ☒

Format: PDF ☒

Other: ☐

Email To: **CDW CONSULTANTS**

Fax To: **CDW CONSULTANTS**

Ending Date/Time: **5/12/22 12:00**

Starting Date/Time: **5/12/22 12:00**

Sample Volume: **500 mL**

Sample Container: **500 mL**

Sample Label: **500 mL**

Sample ID: **500 mL**

Sample Date/Time: **5/12/22 12:00**

Sample Location: **CP 3-5 (4-1) 18301**

Sample Description: **CP 3-5 (4-1) 18301**

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Sample Date/Time: **5/12/22 12:00**

Sample Location: **CP 3-5 (4-1) 18301**

Sample Description: **CP 3-5 (4-1) 18301**

Sample Matrix: **SLUDGE**

Sample Volume: **500 mL**

Sample Container: **500 mL**

Sample Label: **500 mL**

Sample ID: **500 mL**

Sample Date/Time: **5/12/22 12:00**

Sample Location: **CP 3-5 (4-1) 18301**

Sample Description: **CP 3-5 (4-1) 18301**

Preservation Code

Courtesy Use Only

Total Number Of:

VIALS

GLASS

PLASTIC

BACTERIA

ENCORE

Glassware in the fridge? Y/N

Glassware in freezer? Y/N

Prepackaged Cooler? Y/N

\*Pace Analytical is not responsible for missing samples from prepacked coolers

Matrix Codes:

GW = Ground Water

WW = Waste Water

DW = Drinking Water

A = Air

S = Soil

SL = Sludge

SOL = Solid

O = Other (please define)

Preservation Codes:

I = Iced

H = HCL

M = Methanol

N = Nitric Acid

S = Sulfuric Acid

B = Sodium Bisulfate

X = Sodium Hydroxide

T = Sodium Thiosulfate

O = Other (please define)

Reactive sample -01 for  
TCLP Pb per 20x rule.

Please use the following codes to indicate possible sample concentration within the Conc Code column above:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

MA MCP Required

MCP Certification Form Required

CT RCP Required

RCP Certification Form Required

MA State DW Required

PWSID #

Project Entity

Government

Federal

City

Municipality

21 J

Brownfield

WVRA

School

MBTA

WRTA

Other

Company Name:

Address:

Phone:

Project Name:

Project Location:

Project Number:

Project Manager:

Pace Quote Name/Number:

Invoice Recipient:

Sampled By:

Sample Date/Time:

Sample Location:

Sample Description:

Sample Matrix:

Sample Volume:

Sample Container:

Sample Label:

Sample ID:

Sample Date/Time:

Sample Location:

Sample Description:

Sample Matrix:

Sample Volume:

Sample Container:

Sample Label:

Sample ID:

Sample Date/Time:

Sample Location:

Sample Description:

Sample Matrix:

Sample Volume:

Sample Container:

Sample Label:

Sample ID:

Sample Date/Time:

Sample Location:

Sample Description:

Sample Matrix:

Sample Volume:

Sample Container:

Sample Label:

Sample ID:

Sample Date/Time:

Sample Location:

Sample Description:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container  
Numbers With Lab Staff Before Relinquishing  
Over Samples \_\_\_\_\_

**Pace**

Doc# 277 Rev 5 2017

**Pace**

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False  
Statement will be brought to the attention of the Client - State True or False

Client CDW

Received By DR

Date 5/12/22

Time 1810

How were the samples  
received?

In Cooler 7

No Cooler \_\_\_\_\_

On Ice 7

No Ice \_\_\_\_\_

Direct from Sampling \_\_\_\_\_

Ambient \_\_\_\_\_

Melted Ice \_\_\_\_\_

Were samples within  
Temperature? 2-6°C 7

By Gun # 5

Actual Temp - 3.7

By Blank # \_\_\_\_\_

Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? NA

Were Samples Tampered with? NA

Was COC Relinquished? 7

Does Chain Agree With Samples? 7

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? 7

Were samples received within holding time? 7

Did COC include all  
pertinent information? Client 7  
Project 7

Analysis 7

Sampler Name 7

ID's 7

Collection Dates/Times 7

Are Sample labels filled out and legible? 7

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? 7

Is there enough Volume? 7

Is there Headspace where applicable? 7

Proper Media/Containers Used? 7

Were trip blanks received? F

Do all samples have the proper pH? NA

Who was notified? \_\_\_\_\_

Who was notified? \_\_\_\_\_

Who was notified? Davies

MS/MSD? F

Is splitting samples required? F

On COC? F

Base \_\_\_\_\_

Vials	#	Containers	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	<u>4</u>
Meoh-	<u>1</u>	250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-	<u>2</u>	Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass	<u>1</u>	Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

#### Unused Media

Vials	#	Containers	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test, a Pace Analytical Laboratory

Project #: 22E1819

Project Location: 240 Beaver St., Waltham, MA

RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

22E1819-01

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM II B ( )	MassDEP VPH (GC/PID/FID) CAM IV A ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP VPH (GC/MS) CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
----------	---	--

**Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

**I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.**

Signature:

Lisa Worthington

Position:

Technical Representative

Printed Name:

Lisa A. Worthington

Date:

06/09/22



**APPENDIX C**  
**COPIES OF PUBLIC NOTIFICATION LETTERS**

**APPENDIX C**

**COPIES OF PUBLIC NOTIFICATION LETTERS**

## **SECTION 01 11 00**

### **SUMMARY OF WORK**

#### **PART 1 -GENERAL**

##### **1.1 PROJECT/WORK IDENTIFICATION**

- A. General: The name of the project is "240 Beaver Street, Waltham, MA". The project number of 1830.20 as noted on Drawings, Specifications and contract documents produced by CDW Consultants, Inc.

##### **1.2 DESCRIPTION OF WORK**

- A. The CONTRACTOR'S work includes certain contaminated soil excavation, management and disposal activities to be performed at a portion of the property at 240 Beaver Street, Waltham, MA in compliance with the Draft Release Abatement Measure (RAM) Plan dated September 22, 2022, and prepared in accordance with the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000. Specific Contractor activities shall include the following:
- Clearing, grubbing, and preparation of the Site
  - The excavation and off-site disposal of up to 500 cubic yards (750 tons) of soil impacted with metals, pesticides and PCBs
  - Site restoration and backfill
  - All other work and materials as specified, noted, and appurtenant
  - All work to be completed by \_\_\_\_\_
- B. The CONTRACTOR shall provide a plan to manage, control and secure the work site during the performance of work. The plan shall describe site security, erosion control, and public safety measures as they relate to the use of equipment, access routes, and the management, storage and loading of excavated soil.
- C. The Massachusetts Department of Environmental Protection (MassDEP) Release Tracking Numbers (RTNs) associated with the Site are 3-36027 and 3-36180. CONTRACTOR is directed to MassDEP's online searchable site at <https://eeaonline.eea.state.ma.us/portal#!/search/wastesite> to obtain additional information about the Sites.

##### **1.3 COORDINATION**

- A. General: The Work of the Contract includes the beginning of construction activity through project closeout and warranty periods. The CONTRACTOR shall coordinate all Work with the City of Waltham and ENGINEER.

**1.4 QUALITY ASSURANCE:**

- A. Quality Assurance Plans: The CONTRACTOR shall agree to participate in and conform to all items contained in the Draft RAM Plan and any modifications to that plan.

**1.5 PERMITTING REQUIREMENTS:**

- A. Local and State Permits: The CONTRACTOR will be responsible for obtaining any local and State permits as required by the City of Waltham to perform the Work of the Contract. The CONTRACTOR shall comply with all requirements and conditions identified in the permits.
- B. Other Permits: Permits, if required for other work including the development and/or operation of the CONTRACTOR's temporary facilities, shall be the responsibility of the CONTRACTOR.

**1.6 CONTRACTOR REQUIREMENTS:**

- A. All employees of the CONTRACTOR and his Subcontractors shall have, at a minimum, OSHA 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training, including all appropriate refresher training, in accordance with 29 CFR 1910.120.
- B. The CONTRACTOR shall develop its own site-specific health and safety plan for its workers and visitors to the work site. The CONTRACTOR shall provide its employees with appropriate personal protective equipment as warranted by site conditions and/or the results of employee personal exposure monitoring. The ENGINEER is not responsible for the health and safety of the CONTRACTOR.

**END OF SECTION 01 11 00**

## **SOIL REMEDIATION AT 240 BEAVER STREET, WALTHAM, MA**

### **TECHNICAL SPECIFICATIONS**

01 11 00	Summary of Work
01 71 13	Mobilization, Staging and Demobilization
02 61 00	Handling, Transportation and Disposal of Excavated Materials
31 00 00	Earthwork

### **CONTRACT DRAWINGS**

C-1.0	Approximate Area of Soil Excavation
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### **APPENDICES**

APPENDIX A	Draft Release Abatement Measure Plan and TSCA Performance Based Cleanup Plan, 240 Beaver Street, Waltham, MA, RTN's 3-36027 and 3-36180
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## **SECTION 01 71 13**

### **MOBILIZATION, STAGING AND DEMOBILIZATION**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION**

- A. Work Includes: The transportation and storage of all equipment, labor and materials to and from the construction site necessary to complete the Work.
- B. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and these Specifications.

#### **PART 2 - MATERIALS**

NOT USED

#### **PART 3 - EXECUTION**

##### **3.1 STORAGE AREA**

It shall be the Contractor's sole responsibility to procure and maintain a suitable storage area for tools, materials and equipment necessary to perform the work.

1. The storage area obtained by the Contractor shall not obstruct or interfere with pedestrian or vehicular movement, and shall not occupy any space within a public right-of-way, except with specific permission from the Owner.
2. For temporary construction access and staging, the Contractor shall enter via the driveway from Beaver Street as shown on the drawing. The Contractor shall set up a temporary staging area for construction purposes on the property.
3. The storage / staging and decontamination areas shall be kept neat at all times.
4. The Owner shall not be a party to negotiations related to acquisition of areas for storage or cleanup of the same.

##### **3.2 EQUIPMENT**

- A. Contractor shall transport all equipment to the site, assemble the equipment, disassemble equipment and remove as needed to proceed with the work. During construction, all equipment and materials shall be maintained as needed during the work.
- B. Contractor shall lay and position temporary facilities such as decontamination and equipment/personal trailers to minimize disruption of the work.

## **PART 4 - MEASUREMENT AND PAYMENT**

### **4.1 GENERAL**

- A. Separate Measurement or payment shall not be made for all Work of this section, but all costs in connection therewith shall be included in the Contract Lump-Sum price.
- B. Lump Sum cost shall be inclusive of additional occurrences or delays (weather), if required to complete the project

**END OF SECTION 01 71 13**

## **SECTION 02 61 00**

### **HANDLING, TRANSPORTATION, AND DISPOSAL OF EXCAVATED MATERIALS**

#### **PART 1 GENERAL**

##### **1.1 DESCRIPTION OF WORK**

- A. Work Included: This Section describes the work activities required to access, excavate, manage, transport, and dispose of excavated materials.
- B. CONTRACTOR shall furnish all labor, materials, equipment, and incidentals and perform all operations necessary to properly excavate, segregate, sample, classify, handle/manage, load, transport, and dispose of excavated materials within the Area of Work.
- C. CONTRACTOR'S attention is directed to site plans showing the physical limitations of the Area of Work and is fully responsible for managing the sequence of work accordingly.
- D. CONTRACTOR shall furnish, operate, and maintain excavated material stockpile/staging areas and equipment decontamination stations for the duration of excavation activities and dismantle and dispose of decontamination stations and stockpile/staging areas at project completion.
- E. CONTRACTOR is directed to review the attached "Draft Release Abatement Measure Plan and TSCA Performance Based Cleanup Plan" and shall adhere to the provisions of that plan. The plan will become final when submitted to MassDEP after project award and prior to the start of work.

##### **1.2 RESPONSIBILITIES**

- A. CONTRACTOR's Responsibilities:
  - A. The CONTRACTOR shall prepare an Excavated Materials Management Plan (EMMP) that describes their means and methods to complete the work to be performed under this Specification.
  - B. The CONTRACTOR shall demonstrate that they will conduct the work using the most feasible and least environmentally impactful means and methods. Any additional permitting or mitigation measures required, or delay of time to complete the work as a result of CONTRACTOR means and/or methods or changes thereto, shall be the responsibility of the CONTRACTOR.
  - C. The CONTRACTOR shall establish sufficient survey controls to accurately remove soils to the horizontal and vertical limits established in the drawings.
  - D. The CONTRACTOR shall perform excavation work to the extents shown on Site Plan C-1.0 and as marked in the field. CONTRACTOR shall perform additional excavation work, in areas where unacceptable contamination remains in soil, as directed by the City of Waltham's (City) Environmental Consultant.



- E. The CONTRACTOR shall assist the City's Environmental Consultant in obtaining representative confirmatory samples of the excavated areas for field screening.
  - F. The CONTRACTOR shall manage excavated material by securely containing it prior to transport to the disposal, recycling, and reuse facilities.
  - G. The CONTRACTOR shall wait until all disposal facility approvals have been received prior to the loading and transportation of excavated materials for disposal.
  - K. The CONTRACTOR shall furnish, operate and maintain equipment decontamination stations for the duration of excavation work.
  - L. The CONTRACTOR shall develop and implement site-specific emergency response and health and safety protocols and procedures for workers, visitors and trespassers.
  - M. The CONTRACTOR shall take protective measures during work included in this section, to prevent conditions at the site that could result in any adverse effect on nearby wildlife/aquatic ecosystems.
  - N. For each shipment of material transported to a disposal facility, the CONTRACTOR shall demonstrate to the City that the least costly means of disposal has been selected. This demonstration shall be made prior to shipment.
  - O. The CONTRACTOR shall advise the City at least three business days in advance of the schedule for both excavation and transportation off-site of excavated material. No off-site shipments will occur without the approval of the City.
  - P. The CONTRACTOR shall provide an environmental field technician to oversee the loading of excavated material for off-site disposal.
  - Q. The CONTRACTOR shall complete the transportation and final disposal of excavated materials within 90 days of initial generation of the materials.
  - R. The CONTRACTOR shall develop and implement dust control measures.
- B. City of Waltham Responsibilities:
- A. The City will review and approve the proposed selection of off-site disposal facilities.
  - B. The City's Environmental Consultant has completed waste disposal sampling and analysis, and shall perform field screening and confirmatory sampling of excavated areas, dust control monitoring, and soil documentation coordination.
  - C. The City will be the Generator and will sign all waste profiles and MCP Bills of Lading (BOL) as the Generator.
  - D. The City's Licensed Site Professional (LSP) will complete one waste profile, and sign and stamp BOLs as the LSP of Record. All soil shall be transported under a BOL. The receiving facility shall provide electronic attestation of receipt of soils within five days of

receiving notification from the LSP of the availability of the BOL for that purpose on eDEP. Additional waste profiles beyond the first, will be prepared by the CONTRACTOR.

### **1.3 QUALITY ASSURANCE AND QUALITY CONTROL**

- A. The CONTRACTOR shall be responsible for the selection of a final disposal facility for soil. Sampling was conducted in May 2022 by the City's LSP to precharacterize the soil.
- B. The provided precharacterization data is intended to include sufficient characterization of the soils for disposal without a need for additional testing. In the absence of the need for additional testing due to quantity changes or unexpected soils encountered during excavation, the CONTRACTOR shall be responsible for any additional sampling and analyses of soil samples required by his selected waste disposal facility beyond those provided in the provided data
- C. The Contractor shall be responsible for any additional sampling and analysis of soil samples required by his selected waste disposal facility, and/or preparation of additional disposal profiles resulting from a change to the selected disposal facility.

### **1.4 SUBMITTALS**

- A. The following shall be submitted within five (5) days after the issuance of the Notice to Proceed. No on-site work can begin until all submittals identified in 1.4(A and B) have been received and approved.
- B. A schedule detailing the proposed sequence of work.
- C. A detailed site plan indicating the construction staging/stockpile areas as they relate to the active construction area. The detailed site plan shall show the potential layout of the staging area as it relates to the stockpile soil, debris and/or miscellaneous materials and construction materials.
- D. A material management system plan to track the excavated materials from generation through final disposition. Plan shall include at a minimum the following:
  - a. Provisions for the tracking of the excavated materials from the "point of excavation location" to the location of the stockpile material in the storage/staging area to the final disposition of the stockpiled material including all proposed daily log sheets.
  - b. Drawings of the proposed area of excavation and any temporary materials management areas, including locations where trees will be removed.
  - c. An Equipment/Vehicle Decontamination Plan.
- E. All pertinent information relating to the transport of excavated material. The information, at a minimum, shall include:
  - a. Name and address of all transporters.
  - b. Transporter identification number (U.S. Environmental Protection Agency (EPA) or Massachusetts Department of Transportation Transporter) and expiration date.
  - c. Proof of permit, license, or authorization to transport excavated material in all affected states.

- d. Details of methods, vehicle and containers (as applicable) to be used for transporting excavated material.
  - e. Dust control measures.
  - f. Plan for on-site pre-treatment of excavated soil that is unsuitable for transport.
- F. The CONTRACTOR shall identify each waste stream and propose an appropriate disposal facility that will accept the excavated material as classified. The facility shall provide written confirmation that it is permitted to accept and will accept the classified material of the general quality and quantity described in the Draft RAM Plan.
- G. The Contractor shall provide all final disposal documentation, including but limited to:
- a. Load sheets completed and signed by the hauler and the receiving facility.
  - b. Certified weight slips from the receiving facility.
  - c. The facility and DCR's attestations of shipment and receipt.

## 1.5 REFERENCES

- A. All regulations cited and those of other governing agencies in their most recent version are applicable. This Section refers to many requirements found in these references, but in no way is intended to cite or reiterate all provisions therein or elsewhere. It is the CONTRACTOR's responsibility to know, understand, and abide by all such regulations and common practices. Other provisions contained in these references may from time to time during the execution of this Contract be enforced by the Engineer. In the event of a conflict, the most stringent regulations shall govern.

The following documents and/or publications are made part of this Section by reference herein:

- A. Massachusetts Contingency Plan (MCP), 310 CMR 40.0000.
- B. Massachusetts Hazardous Waste Regulations, 310 CMR 30.00.
- C. Massachusetts Solid Waste Management Facility Regulations, 310 CMR 19.00.
- D. Massachusetts Site Assignment Regulations for Solid Waste Facilities, 310 CMR 16.000.
- E. Massachusetts Wetlands Protection Act Regulations, 310 CMR 10.00.
- F. "Interim Remediation Waste Management Policy for Petroleum Contaminated Soils", MassDEP, Bureau of Waste Site Cleanup Policy #WSC-94-400.
- G. "Hazardous Waste Operations and Emergency Response", Federal Occupational Safety and Health Act (OSHA), 29 CFR 1910.120.
- H. "General Regulations for Hazardous Waste Management," EPA, 40 CFR 260.
- I. "Regulations for Identifying Hazardous Waste, Hazardous Waste Generators and Hazardous Waste Transporters", EPA, 40 CFR 261, 262 and 263.
- J. "Standards for Management of Specific Hazardous Wastes and Facilities", EPA, 40 CFR 266.
- K. "Reuse and Disposal of Contaminated Soil at Massachusetts Landfills", MassDEP Policy # COMM-97-001.

- L. "Compendium of Quality Control Requirements and Performance Standards for Selected Analytical Protocols" (CAM), MassDEP, Bureau of Waste Site Cleanup Policy # WSC-10-320.
- M. "Technical Update: Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil," MassDEP.
- N. "Similar Soils Provision Guidance (MassDEP, Bureau of Waste Site Cleanup Policy # WSC#-13-500).
- O. "Interim Remediation Waste Management Policy for Petroleum Contaminated Soils, Attachment II, Jar Headspace Analytical Screening Procedure," MassDEP, Bureau of Waste Site Cleanup Policy #WSC-94-900.
- P. Local regulations governing dust control, soil handling, and health and safety.
- Q. All other applicable Federal, State, or local requirements.

## 1.6 DEFINITIONS

- A. Area of Work: the approximate area which includes excavation areas, and those ancillary areas where personnel, equipment and materials are transported, managed, filled or removed. Excavated material not destined for off-site disposal can be returned to approximately the same location from which it originated.
- B. Contaminated Soil: Material found to contain oil or hazardous material (OHM) at concentrations equal to or exceeding applicable MCP Method 1 Standards (310 CMR 40.0300), Reportable Concentrations (310 CMR 40.1600), or regulated background levels (as defined in the MassDEP "Technical Update: Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil" and 310 CMR 40.00006) or other applicable State or Federal Regulations.
- C. Generator: The City will be the Generator, with the exception of materials contaminated by releases from the CONTRACTOR's vehicles, equipment, or supplies.
- D. Hazardous Material/Waste: A waste material or combination of waste material, that because of its quantity, concentration, physical, chemical, or infectious characteristics may cause or significantly contribute to an increase in a serious irreversible or incapacitating reversible illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed. This definition also includes, but is not limited to, materials regulated under TSCA, M.G.L., Chapter 21E, RCRA (40 CFR 239-282), Massachusetts Hazardous Waste regulations (310CMR 30.00), the MCP (310 CMR 40.00), and any applicable Federal regulations.
- E. Special Waste: Any solid waste that is determined not to be hazardous waste and that exists in such quantities or in such chemical or physical state or any combination thereof so that particular management controls are required to prevent an adverse impact from the collection, transport, transfer, storage, processing, treatment or disposal of the solid waste. Asbestos and PCB-contaminated soils/sediments/fill are examples of special waste.

- F. Soil: Any unconsolidated mineral and organic matter, including any fill, overlying bedrock that has been subjected to and influenced by geologic and other environmental factors, excluding sediment.

## **1.7 PERMIT REQUIREMENTS**

- A. The CONTRACTOR shall obtain and adhere to all Federal, State, and local permits required for the transport and disposal of excavated material.
- B. The CONTRACTOR shall verify that the disposal facilities proposed have all certifications and permits as required by Federal, State, and local regulatory agencies to receive and dispose of the excavated material.
- C. If applicable, the CONTRACTOR shall adhere to any special conditions of work established by the local Conservation Commission, MA DEP and US Army Corps of Engineers including close-out documentation.

## **PART 2 - PRODUCTS**

### **2.1 GENERAL**

- A. All CONTRACTOR personnel shall wear personal protective equipment and protective clothing consistent with the levels of protection required for this Work.
- B. Any material shipment containers must be approved by and labeled in accordance with the U.S. Department of Transportation (DOT). The containers shall have a secure cover which will prevent a release of material during transportation.
- C. Temporary stockpiles of soil shall be constructed using 10 mil polyethylene double layered as a base. Stockpiles shall be kept covered with a single layer of polyethylene and surrounded with haybales.

## **PART 3 - EXECUTION**

### **3.1 GENERAL**

- A. The CONTRACTOR shall handle and convey all equipment and materials to perform site work described in these Contract documents.
- B. The CONTRACTOR shall excavate soils to the depth and extent shown on the contract drawings. ,
- C. The CONTRACTOR shall load, transport, and dispose of the excavated soil as specified herein.
- D. The CONTRACTOR shall immediately notify the City of visible stains or unnatural odor of any sampled or excavated material, or if potentially contaminated and/or hazardous material is encountered. Work shall not be allowed to continue in this area until approved by the City.

### **3.2 TEMPORARY STORAGE OF EXCAVATED MATERIALS**

- A. The stockpiling or consolidating of excavated material near sensitive human health receptors, such as public and private water supply wells, shall be strictly prohibited per 314 CMR 9.07(4)(d).
- B. Excavated material to be temporarily stockpiled shall be placed entirely on a 10-mil polyethylene liner, shall be covered at the end of each day's work and at all times when earthwork is not taking place on site, with the same material or so as to minimize the infiltration of precipitation, volatilization of contaminants and erosion of the stockpile. Covers used shall be properly secured and replaced if damaged. Temporary fencing shall be placed entirely around stockpiles to prevent employees and trespassers from access.
- F. Excavated material shall be completely covered with a minimum 10 mil-thick layer of plastic tarp at the end of each working day and secured with ropes, ties, anchors or equivalent materials. The covered system shall be capable of resisting actual wind gust at the site, with a minimum wind capacity of 40 miles per hour.
- G. Stockpiles are to be segregated based on a review of pre-characterization data, visual and olfactory conditions, sediment sampling and field screening results obtained during excavation.
- H. Stockpiles shall include haybale berms around the edges to minimize infiltration of storm water or exfiltration of leachate.
- I. Any failure of materials or procedures used in employing the base layer or cover layer shall be immediately repaired, replaced or re-secured so as to minimize precipitation infiltration, volatilization and erosion/runoff of the excavated material.
- J. Movement and/or aeration of excavated material shall be limited to those activities that are necessary to manage such stockpiles.
- K. Disposal of material that is contaminated as a result of careless handling, cross-contamination or use of unauthorized procedures shall be at the CONTRACTOR'S expense. Delays of Work resulting from temporary storage of excavated material, regardless of the classification, shall be at no additional cost to the the City.
- L. The stockpiles shall be clearly labeled and securely barricaded from contact with workers and the general public.

### **3.3 DEBRIS MANAGEMENT**

- A. The CONTRACTOR is required to recycle/reuse any other recovered materials in lieu of disposal if the material is of acceptable physical quality and chemical quality, and the CONTRACTOR can identify a facility willing and permitted to accept the material at no additional cost.

### **3.4 MCP NOTIFICATION REQUIREMENTS FOR SOIL**

- A. Notification to the MassDEP under the MCP shall be the sole responsibility of the City.
- B. The CONTRACTOR shall be familiar with the MCP definitions of "two-hour", "72-hour" and "120-day" reportable conditions.

- C. The CONTRACTOR shall immediately notify the DCR of any "two-hour", "72-hour" and "120-day" reporting conditions.
- D. Depending upon the nature of the reportable conditions, the MCP may require the cessation of work, implementing a Limited Removal Action (prior to notification), developing and/or implementing an "Immediate Response Action Plan" or a "Release Abatement Measure Plan" prior to continuing work or other actions, which could delay certain aspects of the site work.
- E. The City's LSP shall prepare electronic eDEP MCP filings required during construction, including but not limited to Release Notification Forms (RNF), Release Abatement Measures (RAM), Utility-related Abatement Measures (URAM), and subsequent associated status and closure reports.
- F. The CONTRACTOR shall provide all soil management and disposal documentation in support of those eDEP filings.

### **3.8 ENVIRONMENTAL FIELD MONITORING/DUST CONTROL**

- A. The air quality program is to be designed to protect public health and the environment from the potential generation of dust and OHM contaminant release during the Work.
- B. When there is a potential for visible dust being generated during periods of site activity, air monitoring may be limited to visual assessment and documentation.
- C. Dust shall be controlled during excavation and movement of soil to limit potential spread of contaminants and potential exposure of contaminants to workers and the public.
- D. Nuisance dust levels shall be reduced by pre-wetting the surface soils and by establishing and maintaining clean access roads. At a minimum, the CONTRACTOR shall provide clean water that is free from salt, oil and other deleterious materials.
- E. When feasible, access roads shall be sprayed with water on a regular basis to minimize the generation of dust.
- F. All containers and stockpiles shall be covered at all times, except as necessary to place or remove materials from the containers or stockpiles. The CONTRACTOR shall monitor the covers daily to ensure the covers are in place and effectively eliminating the generation of dust.

### **3.9 DISPOSAL FACILITY CLASSIFICATION**

- A. The CONTRACTOR shall transport the material for off-site disposal at a permitted TSCA facility that has accepted the material prior to shipment.
- B. Material shipped to any disposal facility must meet the selected facility's chemical and physical acceptance criteria. Selected facilities must be established, fully operational, appropriately insured, and be operating in compliance with all applicable local, state, and federal regulations.

### **3.10 WASTE PROFILES AND SHIPPING DOCUMENTS**

- A. The CONTRACTOR shall provide certified tare and gross weight slips for each load received at the accepted facility and these shall be attached to each returned shipping document.

- B. The CONTRACTOR shall prepare and submit to the City for review all waste profile applications and questionnaires, and coordinate with disposal facilities and all Federal and State Environmental Agencies.
- C. The City's Environmental Consultant shall prepare all draft Bills of Lading for review by the CONTRACTOR'S selected facility prior to shipment. Final copies of Bills of Lading shall be signed by the City as generator and by the City's LSP following approvals of draft Bills of Lading.

### **3.11 TRANSPORT OF EXCAVATED MATERIAL**

- A. The CONTRACTOR shall not be permitted to transport materials off-site until all disposal facility documentation has been received, reviewed, and approved by the City.
- B. The CONTRACTOR shall transport materials from the site to the disposal facility in accordance with all United States Department of Transportation (USDOT), USEPA, MassDEP, and applicable state and local regulations.
- C. The Hauler(s) shall be licensed in all states affected by transport.
- D. The CONTRACTOR shall be responsible for ensuring that free liquid in soil is not transported. "Wet soils" with free-draining liquids shall not be loaded for transport. When there is a question as to whether this standard is met, the paint filter test (EPA Method 9095) shall be used to determine the presence of free-draining liquids in a representative sample. The CONTRACTOR shall collect and dispose of or manage any free liquids that may result during transportation at no additional cost to the City.
- E. All excavated material transported upon public roadways shall be covered by a tarpaulin or other means to prevent the material from escaping the vehicle during transport, and where necessary, truck tire and undercarriage decontamination shall be employed to prevent the tracking of soils onto public roadways.

## **PART 4 - MEASUREMENT AND PAYMENT**

### **4.1 GENERAL**

- A. Measurement and payment for the work of this section is based upon the definitions and classification of the excavated material as described in Sections 1.6 (B) and 3.9. The most cost-effective means of managing, transporting, re-use or disposal shall be used.
- B. City approval is required prior to transportation and disposal of any materials pre-classified under 1.6 (B).

### **4.2 MEASUREMENT**

- A. Excavated materials that are classified for transportation and disposal under 1.6 (B), will be measured on a Per Ton basis. The costs covered under the Unit Price shall include all



applicable taxes and surcharges.

- B. No separate measurement will be made for all other work in this section, but all costs in connection therewith shall be included in the Contract lump sum price except as otherwise noted. All preparation and incidental work necessary to accomplish the work herein will be considered incidental to the Lump Sum price.

#### **4.3 PAYMENT**

- A. Separate payment shall not be made for all other Work of this section, but all costs in connection therewith shall be included in the Contract Lump-Sum price. All preparation and incidental work necessary to accomplish the work herein will be considered incidental to the Lump Sum price.

#### **4.4 PAYMENT ITEMS**

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
5	TRANSPORT AND DISPOSE OF CONTAMINATED SOIL	TN

**END OF SECTION 02 61 00**

## **SECTION 31 00 00**

### **EARTHWORK**

#### **PART 1 - GENERAL**

##### **1.1 DESCRIPTION OF WORK**

- A. Extent of earthwork as indicated on the Contract Drawings and as specified herein.
- B. Furnish labor, materials, equipment, transportation and services required to complete all earthwork requirements as specified herein or indicated on the Contract Drawings. The work includes, but is not limited to the following:
  - 1. Clearing, grubbing, and preparation of the Site.
  - 2. Providing, placing, and compacting all fill materials required to complete the project.
  - 3. Removal and on-site relocation or off-site disposal of all boulders, as defined herein, as they interfere with the work.
  - 4. Excavation and temporary stockpiling of soils impacted with metals, PCBs, and pesticides to depths of 9 feet, or to levels approved by the City's ENGINEER.
  - 5. Temporary protection of adjacent public and private property.
  - 6. Legal off-site disposal of unsuitable or surplus excavated materials including soil impacted with metals, pesticides and PCBs.
  - 7. All sheeting, shoring and bracing necessary to protect truck and equipment access areas from collapse.
  - 8. Rough Grading.
  - 9. Restoration.
  - 10. Dust Control.
  - 11. Segregating, culling and all screening operations, stockpiling and handling of on-site material required to render the material suitable for reuse on-site as indicated herein.
  - 12. Preparation and submittal of a Health and Safety Plan prior to initiating earthwork related activities.

##### **1.2 STANDARDS AND DEFINITIONS**

- A. The following standards and definitions are applicable to the work of this Section to the extent referenced herein:

1. MDPW Specifications: The Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, including latest revisions.
2. ASTM: American Society for Testing and Materials.
3. AASHTO: American Association of State Highway and Transportation Officials.
4. MCP: Massachusetts Contingency Plan, 310 CMR 40.0000
5. Trench Excavation: Excavations of any length where the width is less than twice the depth and where the shortest distance between payment lines does not exceed ten (10') feet.
6. Open Excavation: All excavations not conforming to the definition of Trench Excavation shall be defined as Open Excavation.
7. Invert or Invert Elevation: The elevation at the inside bottom surface of the pipe or channel.
8. Un-Regulated Soil: Excavated material consisting of natural subsoil, or natural glacial outwash which is completely segregated from existing fill material, and is not impacted by contaminants which may be disposed of off-site without restriction
9. Regulated Soil: Excavated material which is impacted by contaminants and, if transported off-site, must be disposed of at a landfill or similar facility as specified in Section 026100, Handling, Transportation, and Disposal of Excavated Materials.
10. The words "finished grade" as used herein shall mean the required final grade elevations indicated on the Contract Drawings. Spot elevations shall govern over proposed contours. Where not otherwise indicated, project site areas outside of the building shall be given uniform slopes between points for which finished grades are indicated or between such points and existing established grades
11. The word "subgrade" as used herein, means the required surface of natural glacial outwash deposit, or compacted Structural Fill. This surface is immediately beneath the site improvements, specially dimensioned fill, paving, loaming or other surfacing material.

### **1.3 EXAMINATION OF SITE CONDITIONS AND DOCUMENTS**

- A. It is hereby understood that the CONTRACTOR has carefully examined the site and all conditions affecting work under this Section. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions as indicated in the Contract Documents, or obvious from observation at the Site
- B. Plans, surveys, measurements, and dimensions under which the work is to be performed are believed to be correct, but the CONTRACTOR shall have examined them for himself during the bidding period, as no allowance will be made for any errors or inaccuracies that may be found except as otherwise provided herein.

#### **1.4 SUBSURFACE CONDITIONS**

- A. It is the CONTRACTOR's sole responsibility to make interpretations and draw conclusions with respect to the character of the materials to be encountered and their impact upon his work based on his expert knowledge.

#### **1.5 PERMITS, CODES AND SAFETY REQUIREMENTS**

- A. Work shall conform to the Contract Drawings and Specifications and shall comply with applicable codes and regulations. Present in writing to the ENGINEER, all conflicts between the Contract Drawings, Specifications, and applicable codes and regulations, for resolution before commencing the Work.
- B. Comply with all rules, regulations, laws and ordinances of the City of Waltham and the Commonwealth of Massachusetts, and of all other authorities having jurisdiction. All labor, materials, equipment and services necessary to make the work comply with such requirements, shall be provided without additional cost to the CITY.
- C. The CONTRACTOR shall not close any street, sidewalk or passageway except as indicated on the Contract Drawings. The CONTRACTOR shall so conduct his operations as to interfere as little as possible with the use ordinarily made of roads, driveways, sidewalks or other facilities near enough to the work to be affected thereby.
- D. The CONTRACTOR shall procure and pay for all permits and licenses required for the complete work specified herein and shown on the Contract Drawings at no additional cost to the CITY. Arrange and pay for legal off-site disposal of all excess excavated materials, obtain proper disposal receipts from the applicable disposal facility for verification.
- E. Notify "Dig Safe" and the City before starting work; comply fully with utility company requirements.

#### **1.6 LAYOUT AND GRADES**

- A. The CONTRACTOR shall maintain and/or re-establish benchmarks and survey monuments shown on the Contract Drawings or found to exist on the site to provide a base reference for the construction. Replace any that may become destroyed or disturbed. The CONTRACTOR shall employ and pay all costs for a registered Civil Engineer or Surveyor who is licensed within the jurisdiction of the project site to lay out all lines and grades in accordance with the Contract Drawings and Specifications, and as necessary or required for the construction.

#### **1.7 DISPOSITION OF EXISTING UTILITIES**

- A. Active utilities existing on the site shall be carefully protected from damage and relocated or removed by others as specified in the Contract Documents. When an active utility line is exposed during construction, its location and elevation shall be plotted on the record Contract Drawings and both the ENGINEER and UTILITY OWNER notified in writing.

- B. Inactive or abandoned utilities encountered during construction operations shall be noted on the record Contract Drawings and reported in writing to the ENGINEER.

## **1.8 DISPOSAL**

- A. The CONTRACTOR shall manage all on-site excavated soils as specified in Section 026100, Handling, Transportation, and Disposal of Excavated Materials.
- B. Solid waste resulting from screening or culling operations shall become the property of the CONTRACTOR and be legally disposed of off-site at no additional cost to the OWNER.

## **1.9 SUBMITTALS**

- A. Submit, as specified in Division 01, GENERAL REQUIREMENTS, the following, and as specified in this Section
  - 1. A detailed construction sequence plan for project excavation indicating temporary stockpile areas, side slopes of excavations, limits of any required temporary excavation support and sequence and procedures for slope protection, subgrade protection, excavation, filling, backfill and compaction.
  - 2. No backfill materials shall be brought to the site without prior approval of the City. Submit the following information to the City for review at least two (2) weeks prior to use:
    - a. Location of the borrow site, including a street map with the limits of the borrow pit property and the location of the borrow source on the site clearly illustrated.
    - b. Present and past usage of the source site and material.
    - c. Any previously existing report(s) associated with an assessment of the source site as relates to the presence of oil or other hazardous materials.
  - 4. Results of the sampling and monitoring program as specified herein for the manufactured top soils.
  - 5. Soil samples.
    - a. Classification in accordance with ASTM D2487 for each on-site or borrow soil material proposed for fill, backfill, or engineered fill.
    - b. Laboratory compaction curve in accordance with ASTM D698 for each on site or borrow soil material proposed for fill, backfill, or engineered fill.

## **PART 2 PRODUCTS**

### **2.1 MATERIALS**

- A. Ordinary Fill: Well-graded, natural inorganic soil approved by the ENGINEER and meeting the following requirements:

1. It shall be substantially free of organic or other weak or compressible materials, of frozen materials, and of particles larger than 4 inches maximum dimension.
2. It shall be of such nature and character that it can be compacted to the specified density in a reasonable length of time.
3. It shall be free of highly plastic clays, of all materials subject to decay, decomposition or dissolution, and of cinders or other materials that will corrode piping or other metal.

B. Topsoil: Provide topsoil in accordance with Section 32 90 00.

## **2.2 UNSUITABLE MATERIAL**

- A. Material containing organic matter, frozen materials, debris, materials subject to decomposition, silts too wet to be stabilized, existing fill, and solid waste debris that in the opinion of the ENGINEER, do not satisfy the design requirements, shall be unsuitable material.
- B. Unsuitable material shall be disposed of off-site by the contractor at no additional cost to the City.

## **2.3 EQUIPMENT**

- A. Provide sufficient equipment units of suitable types to spread, level, and compact fills promptly upon delivery of materials.
- B. CONTRACTOR may use any compaction equipment or device that he finds convenient or economical, but the ENGINEER retains the right to disapprove equipment, which, in his opinion, is of inadequate capacity or unsuited to the character of material being compacted.

## **2.4 SOURCE QUALITY CONTROL**

- A. Provide samples of each fill material from the proposed source of supply including on-site sources. Allow at least two (2) weeks for testing and evaluation of results before material is needed.
- B. All fill material that is imported onto the site shall be substantially free of contamination. The concentrations of contaminants in imported fill material shall not exceed either one-half of the Massachusetts Contingency Plan's (MCP's), 310 CMR 40.0000, RCS-1 reporting thresholds, or the pre-existing contaminant conditions at the site, whichever is lower. The ENGINEER reserves the right to require that the CONTRACTOR perform chemical analysis on the sample being submitted to confirm that the sample is free of contaminants as discussed above. It is not likely that chemical analysis will be required for samples representing fill material originating from a commercial bank-run or rock quarry source. However, it is likely that the ENGINEER will require that chemical analysis be performed on samples originating sources other than commercial bank-run or rock quarry sources. The required chemical analysis will include, but may not be limited to, Extractable Petroleum Hydrocarbons (EPH), Volatile Petroleum Hydrocarbons (VPH), Volatile Organic Compounds (VOC's) by 8260, Polynuclear

Aromatic Hydrocarbons (PAH's) by 8270, Total RCRA-8 Metals, Pesticides/PCB's, and pH. The cost of chemical testing when required by the ENGINEER shall be borne by the CONTRACTOR.

- C. Samples of proposed fill material exhibiting concentrations of contaminants in excess of the standards above will be rejected for use on the site by the ENGINEER.
- D. For samples of proposed fill material originating from a recycling facility, the CONTRACTOR will also be required to submit documentation demonstrating that the facility is permitted by the Massachusetts Department of Environmental Protection, or the Department provided with the required notification, to perform recycling of Asphalt, Brick, and Concrete (ABC) materials, non-coated or impregnated with any substances, in accordance with the Massachusetts solid waste regulations 310 CMR 16.05 (3) (e).
- E. ENGINEER will be sole and final judge of suitability of all materials.
- F. Tests of materials, including chemical testing, as delivered may be made from time to time. Materials in question may not be used, pending test results. Remove rejected materials and replace with new, whether in stockpiles or in place.

### **PART 3 EXECUTION**

#### **3.1 GENERAL EXCAVATION**

- A. Excavate all materials as indicated on the Contract Drawings and specified herein.
- B. All excavation shall be performed in the dry. Excavation shall be accomplished by methods that preserve the undisturbed state of subgrade soils.
- C. When excavations have reached the prescribed depths, the ENGINEER shall be notified and will make an inspection of the conditions. After inspection, the CONTRACTOR will receive approval to proceed if conditions meet design requirements.
- D. Should an excavation be carried beyond the depth indicated on the Contract Drawings or as specified herein as a result of CONTRACTOR's error, the CONTRACTOR shall provide and place Ordinary Fill as directed by the ENGINEER, to the required level at no additional cost.

#### **3.2 USES OF FILL MATERIALS**

- A. Fill materials listed above shall be utilized as follows and as otherwise indicated on the Contract Drawings, specified or directed.
- B. Ordinary Fill: For areas backfilled below a depth of 6 inches.

#### **3.3 PLACING FILLS**

- A. Provide all specified fill materials.

- B. Areas to be filled shall be undisturbed stable soil and shall be free of trash, construction debris, compressible or decayable materials and standing water. Do not place fill when subgrade or layers below it are unsuitable.
- C. Notify the ENGINEER when excavations are ready for inspection. Filling shall not be started until conditions have been approved by the ENGINEER.
- D. Furnish approved materials. Place fill in layers not exceeding 6 inches in compacted thickness and compact as specified below for various fill conditions.
- E. Place Ordinary Fill in uniform lifts not exceeding 6 inches (compacted thickness) and compact to 92 percent of its maximum dry Proctor density.
- F. Within lawns and planting areas:
  - 1. All fills to within eighteen inches (18") of finished grade shall be compacted to 90 percent of its maximum modified dry Proctor density.
  - 2. All fills within eighteen inches (18") of finished grade shall be compacted to between 88 percent and 90 percent of its maximum modified dry Proctor density.
- G. In the case of lawn and planting areas, compaction requirements for subgrades and fills shall be considered minimums and maximums within the density percentages called for, and any over compaction of subgrades or fills which would be detrimental to lawn or planting objectives shall be corrected by loosening subgrades or fills through tilling or other means and recompacting to specified compaction limits.
- H. The CONTRACTOR shall notify the ENGINEER three (3) days in advance when the rough grades are established and ready for formal inspection.

### **3.4 ROUGH GRADING**

- A. Rough grading shall include the shaping, trimming, rolling, and refinishing of all surfaces of the subbase, shoulders, and earth slopes, and the preparation of grades as shown on the Contract Drawings. The grading of shoulders and sloped areas may be done by machine methods. All ruts shall be eliminated. Traffic of workers and equipment across the soil subgrade areas shall be prohibited following excavation to the required lines and grades.
- B. If, during the progress of work, any pipe, drain, or other construction is damaged due to operations under the Contract, the CONTRACTOR shall repair all damage at no additional cost to the City and restore damaged areas to their original conditions.
- C. Perform all other cutting, filling and grading to the lines and limits indicated on the Contract Drawings. Grade evenly to within the dimensions required for grades shown on Contract Drawings and specified herein. No stones larger than four inches (4") in largest diameter shall be placed in upper six inches (6") of fill. Fill shall be left in a compacted state at the end of the workday and sloped to drain.
- D. The CONTRACTOR shall bring all areas to grades as shown on the Contract Drawings and in the details. The City however, may make such adjustments in grades and alignments as are found necessary to avoid special conditions encountered.
- E. No rubbish of any description shall be allowed to enter fill material. Such material shall be removed from the site.



- F. Placed fill materials that become disturbed shall be regraded and re-compacted. Fill materials that become contaminated shall be removed and replaced, as directed by the City.

### **3.5 SUBGRADE MAINTENANCE**

- A. The work of this Section shall provide a subgrade which shall be parallel to the finished grades or elevations shown on the Contract Drawings and shall be below finished grades in accordance with the various depths specified herein below.
- B. Upon completion of rough grading operations, remove all debris and rubbish and leave areas ready for work by other trades
- C. Settlement of fills and washouts shall be corrected by filling and compacting as specified herein.

### **3.6 DUST CONTROL**

- A. The CONTRACTOR shall manage dust as specified in Section 026100, Handling, Transportation, and Disposal of Excavated Materials.
- B. The CONTRACTOR shall take all necessary measures and provide equipment and/or materials to minimize dust from rising and blowing across the site and from impacting neighboring residential property to the satisfaction of the OWNER. In addition, the CONTRACTOR shall control all dust created by construction operations and movement of construction vehicles, both on the site and paved ways.
- C. If dust control is required off-site due to work under this Contract, in addition to watering, sweeping and other methods, the CONTRACTOR shall apply water in the required amounts to properly control dust.
- D. The use of calcium chloride, petroleum products, or other chemicals is prohibited. Chemical materials may not be used on subgrades of areas to be seeded or planted.

## **PART 4 - MEASUREMENT AND PAYMENT**

### **4.1 GENERAL**

- A. Separate Measurement or payment shall not be made for all Work of this section, but all costs in connection therewith shall be included in the Contract Lump-Sum price.

**END OF SECTION 31 00 00**

**FIRE DEPARTMENT INFORMATION  
REGARDING CORNELIA WARREN FARM AND FIELD HOUSE  
240 BEAVER STREET**

## DiGregorio, Donna

---

**From:** DiGregorio, Donna  
**Sent:** Friday, September 23, 2022 10:24 AM  
**To:** Fitzgerald, Jennifer  
**Subject:** RE: 240 Beaver Street

Yes, Jennifer Sandra already sent us the information from Building. The Mayor wanted to check to see if the Fire Department had anything on the property.

Thanks I'll give this to her.

Donna

**From:** Fitzgerald, Jennifer <jfitzgerald@fire-dept.waltham.ma.us>  
**Sent:** Friday, September 23, 2022 9:25 AM  
**To:** DiGregorio, Donna <ddigregorio@city.waltham.ma.us>  
**Cc:** Grant, Richard <rgrant@fire-dept.waltham.ma.us>  
**Subject:** RE: 240 Beaver Street

Hi Donna,

I suspect you need the Building Department – it depends on what type of permits you are looking for.

I don't know what a "work card" is.

We have not received any plans for 240 Beaver Street.

That would be the step before they get a building permit (if Fire Department review is required).

-They had a tent on the property 6/04/22-6/05/22.

-I have an expired (5/12/2022) Propane permit for forklift(s).

-We have a copy of DEP form for Asbestos removal in 2010.

-We have record of 4 Aboveground tank removals in 2009.

-We also have records of underground tank removals = 2 in 2001, 2 in 1998, 2 in 1992, 1 in 1991, 1 in 1983.

-Between 2001 to present (current record set) the Fire Department responded to 6 medical calls, 10 accidents (on the street), 3 grass/outdoor fires, 2 wires down/tree fires and one gas burner/smoke problem.

I do not have any other Fire Department permits for 240 Beaver Street.

(Fire Alarm, Sprinkler, Tank Trucks, Above or Underground tank installs, Blasting, Compressed Gas or Cryogenic Fluids, Flammable Storage, Hazardous Materials processing, Hot work, Oil Burners, or Unvented heaters)

If you want a copy of anything we do have, please let me know.

Thanks

*Jennifer Fitzgerald*

Fire Prevention Bureau  
175 Lexington Street  
Waltham, MA 02452

LAW DEPARTMENT INFORMATION  
REGARDING CORNELIA WARREN FARM AND FIELD HOUSE  
240 BEAVER STREET

## SECOND EXTENSION OF LICENSE AGREEMENT

This Second Extension of License Agreement ("Second Extension") is made on December 15, 2020 by and between the University of Massachusetts Amherst ("University") and Community Farms Outreach d/b/a Waltham Fields Community Farm ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018 and a First Extension dated April 30, 2020, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing:

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

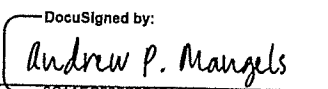
NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. **TERM:** The term of the Agreement shall be extended on a month-to-month basis, terminable by Licensor or Licensee upon thirty (30) days' prior written notice to the other party.
2. **FEE:** In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of One Thousand Six Hundred Sixty-two Dollars and Fifty cents (\$1,662.50) per month.
3. **PREMISES:** The text in Section 2 (Premises) is hereby deleted and replaced with the following text:  
  
"Use of offices 07, 08, 108A, 110, 112, 117, and 119, closets 08A and 118, hallway 112A, restroom 117A, and store room 02, all located within the main building at 240 Beaver Street, Waltham, MA, and land consisting of 8.25 acres farm land and land occupied by CSA Barn, Pesticide Storage Building, Greenhouses 6 and 7, Agricultural Storage Shed, Volunteer Shed, and Learning Garden, as shown in Exhibit A pages one through three."
4. Section 22 (Miscellaneous Provisions) Exhibit A – Licensed Land dated April 27, 2020 is hereby deleted and replaced with Exhibit A – Licensed Land dated January 13, 2021, Basement Floor Plan dated August 10, 2011, and First Floor Plan dated August 10, 2011.
5. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Second Extension as of the date first written above.

**UNIVERSITY:**  
UNIVERSITY OF MASSACHSETTS

By:  DocuSigned by:  
3C1AEC93FF6F431...  
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

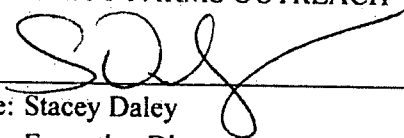
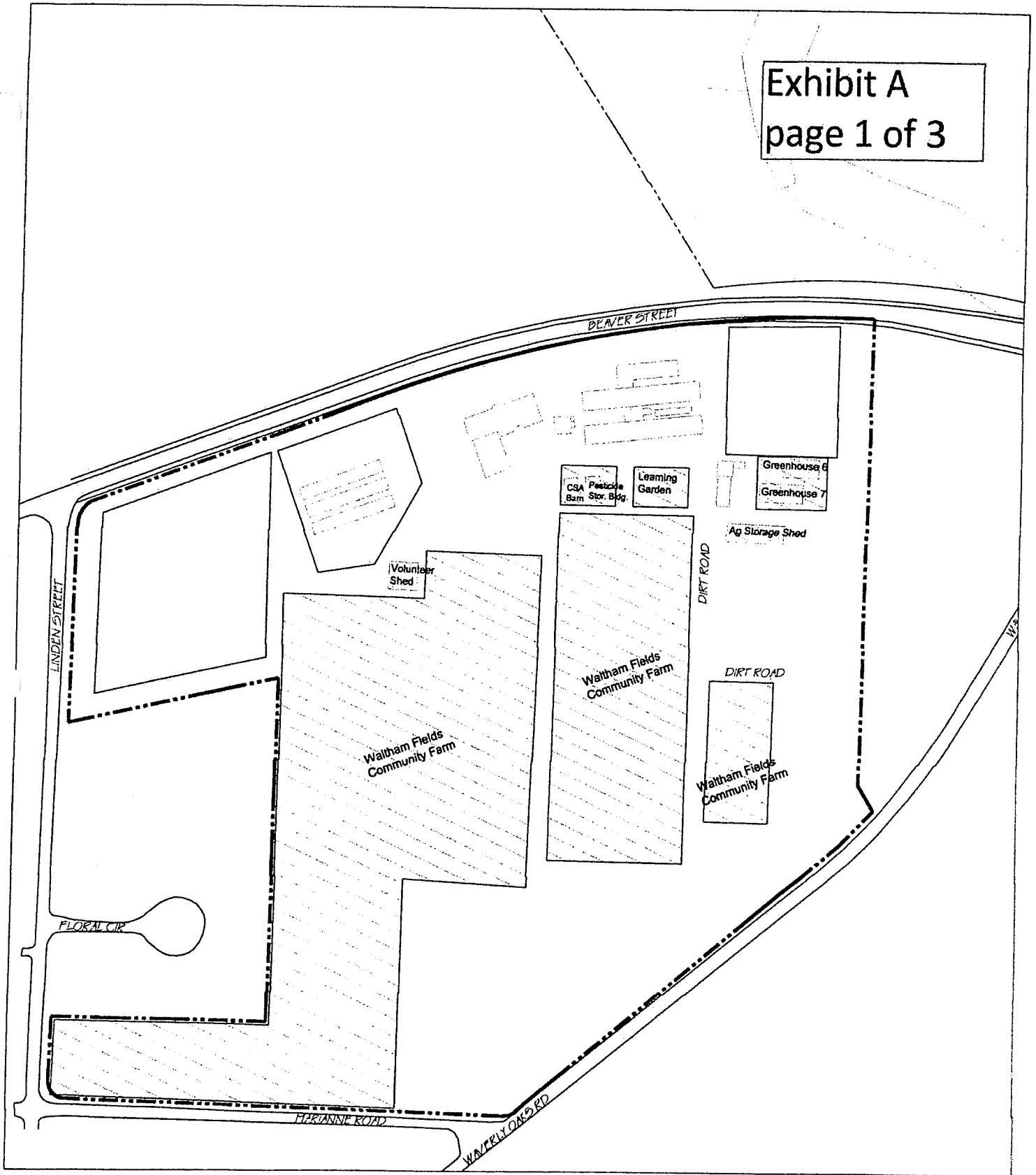
**LICENSEE:**  
COMMUNITY FARMS OUTREACH  
By:   
Name: Stacey Daley  
Title: Executive Director

Exhibit A  
page 1 of 3



 Licensed Land

SCALE: 1"=200'  
0 50 100 200

WALTHAM STATION  
COMMUNITY FARMS OUTREACH  
EXHIBIT A - LICENSED LAND

1/13/2021

UMass Campus Planning



Exhibit A  
page 2 of 3

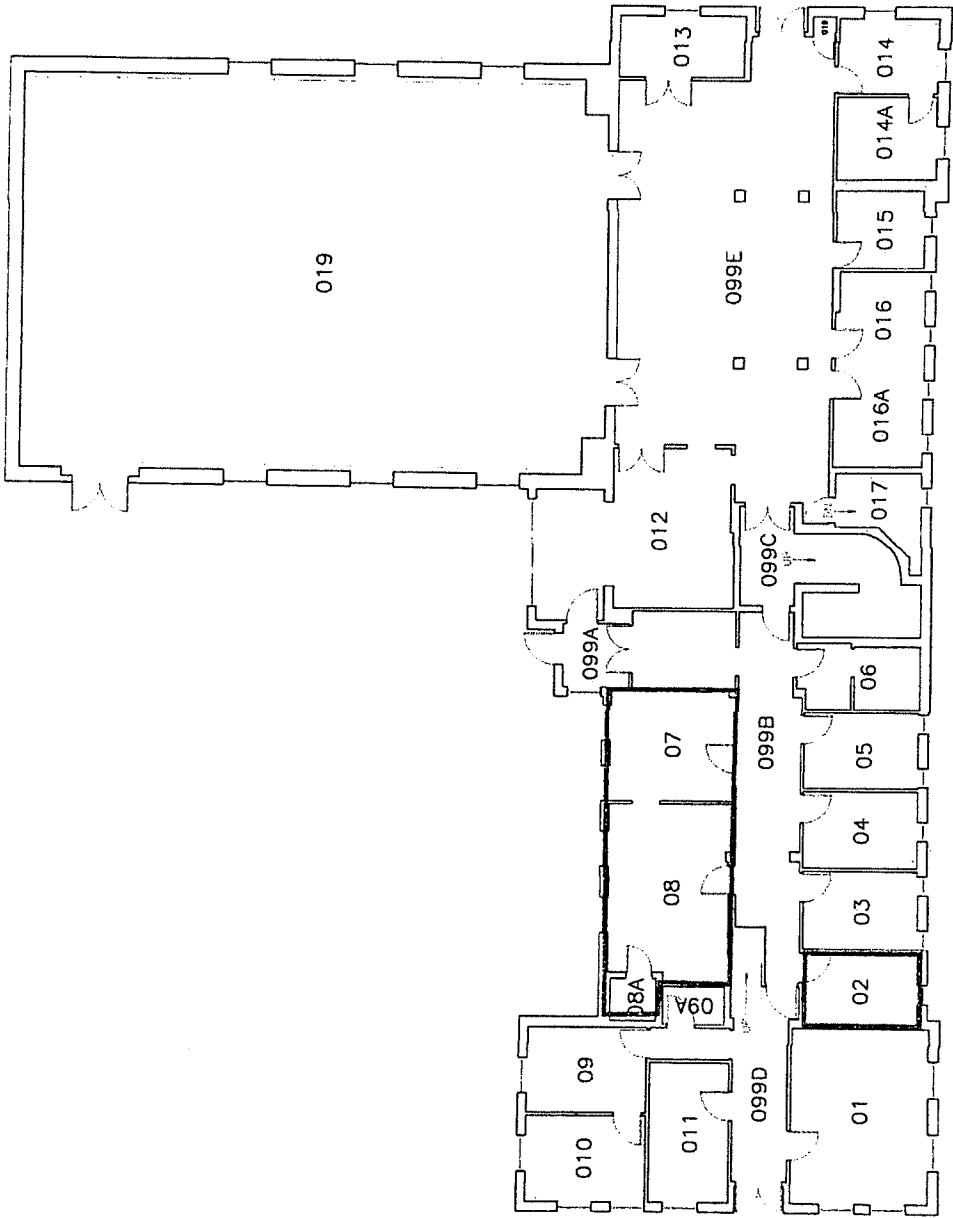
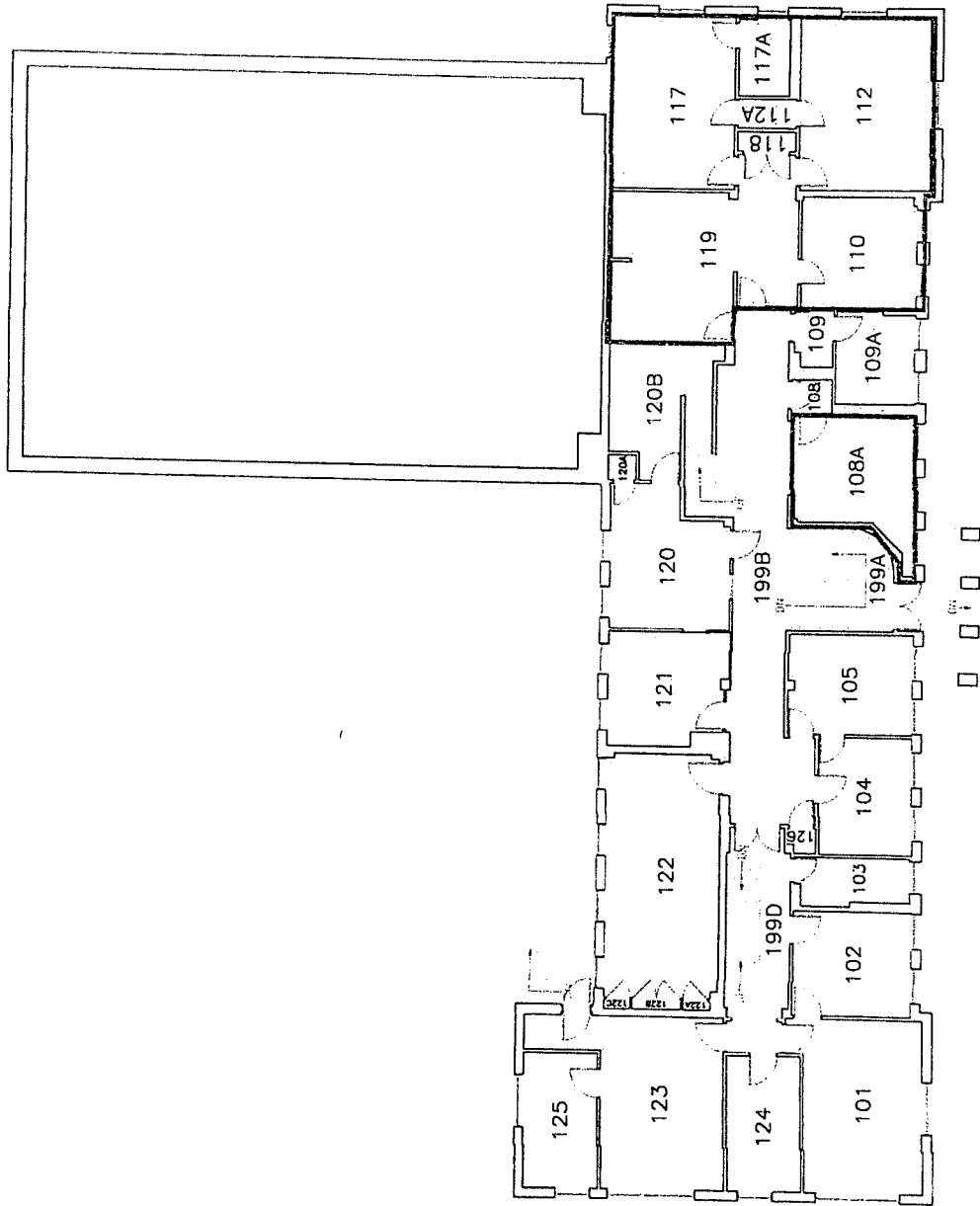




Exhibit A  
page 3 of 3



**ADMINISTRATION BUILDING**  
**FIRST FLOOR PLAN**  
Facilities Planning  
University of Massachusetts Amherst



Issue Date: 08/10/2011  
Revision Date:  
Building No: 229

229-01



## FIRST EXTENSION OF LICENSE AGREEMENT

This First Extension of License Agreement ("First Extension") is made on April 30, 2020 by and between the University of Massachusetts Amherst ("University") and Community Farms Outreach d/b/a Waltham Fields Community Farm ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. Section 1 (Reference Data) of the Agreement shall be modified as follows:
  - a. Delete the Mailing Address of the University currently listed and replace same with: *"Steven Goodwin, Whitmore Administration Building Room 347, 181 Presidents Drive, Amherst, MA 01003"*.
  - b. Delete the Premises and Permitted Use text following the Mailing Address.
2. Delete the text of Section 2 (Location of the Premises) and replace same with:

*"2. PREMISES*

*Use of offices 7, 8, 106, and 119, and store room 2, all located within the main building at 240 Beaver Street, Waltham, MA, and land consisting of 8.25 acres farm land and land occupied by CSA Barn, Pesticide Storage Building, Greenhouses 6 and 7, Agricultural Storage Shed, Volunteer Shed, and Learning Garden, as shown in Exhibit A."*
3. TERM: The term of the Agreement shall be extended through December 31, 2020.
4. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of Twenty Thousand Five Hundred Fifty and 00/100 Dollars (\$20,550.00), payable in advance in monthly installments of One Thousand Seven Hundred Twelve Dollars and Fifty-one cents (\$1,712.50) per month.
5. Section 12 (Surrender of Premises) is hereby amended by deleting the following language in its entirety: *"However, if the expiration or termination takes place after the onset of the*

*Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises."*

6. Section 12 (Hazardous Materials) is hereby amended to replace "Robert Schrader" with "the University's Environmental Health & Safety Office".
7. Section 15 (Insurance) is hereby amended to add the following to the end of the section:  
*"All certificates of insurance from Licensee shall list the University as an additional insured."*
8. Section 22 (Miscellaneous Provisions) is hereby amended by placing an "X" next to Exhibit A to indicate inclusion of same. Exhibit A showing land licensed is hereby attached and incorporated herein by reference.
9. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

[SIGNATURE PAGE TO FOLLOW]

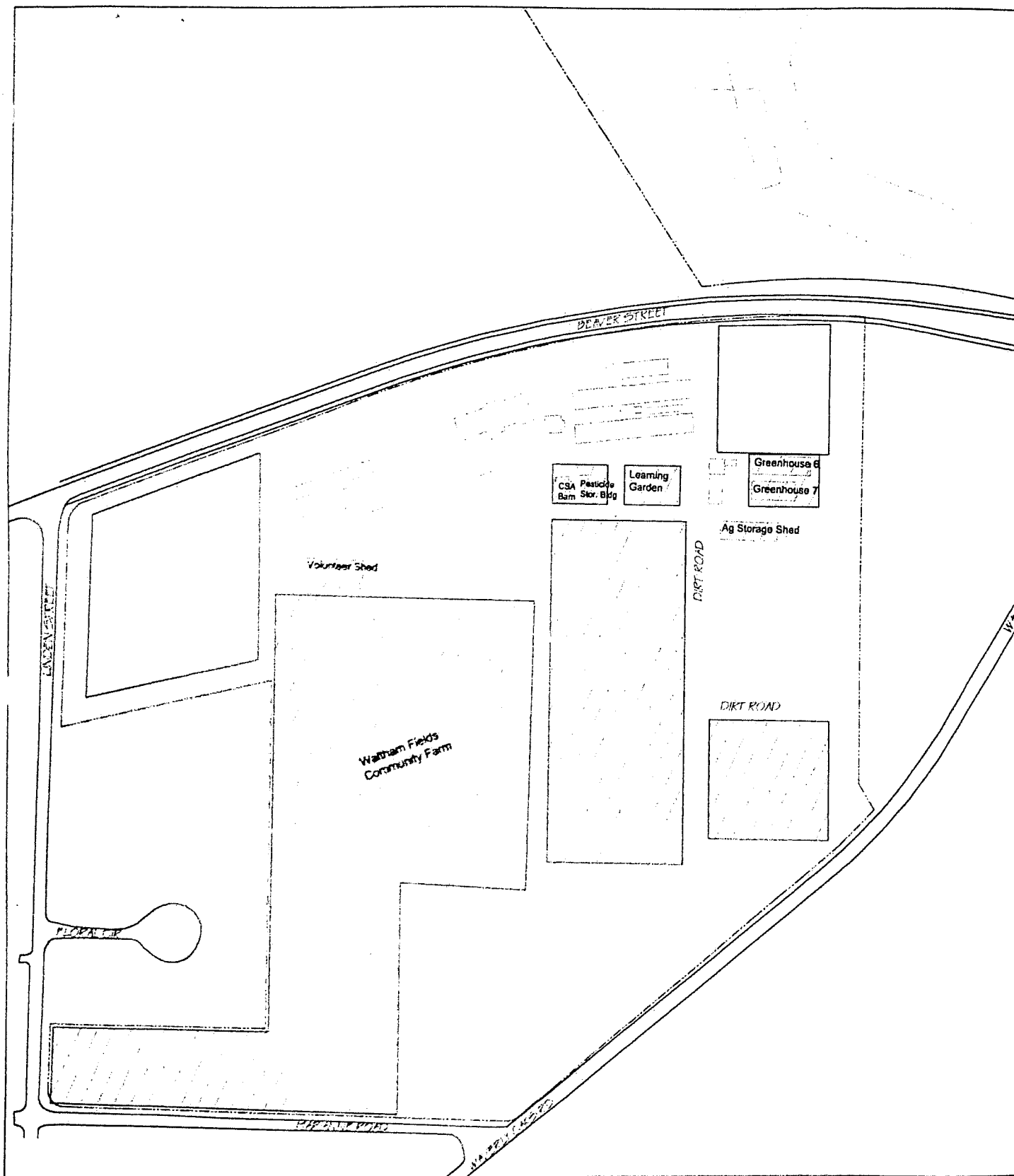
IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first written above.

**UNIVERSITY:**  
**UNIVERSITY OF MASSACHSETTS**

DocuSigned by:  
By: Andrew Mangels  
3C1AEC93FF6F431...  
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

**LICENSEE:**  
**COMMUNITY FARMS OUTREACH**

By: Stacey Daley  
Name: Stacey Daley  
Title: Executive Director



 Licensed Land

SCALE: 1"=200'  
0 50 100 200

WALTHAM STATION  
COMMUNITY FARMS OUTREACH  
EXHIBIT A - LICENSED LAND

4/27/2020



UMass Campus Planning

## **Agreement and Conditions for Use of Office Facilities at the UMass Waltham Center**

This Agreement provides conditions for use of land at the UMass Waltham Center. This agreement is between Community Farms Outreach d/b/a Waltham Fields Community Farm (hereinafter Licensee), a non profit corporation and the University of Massachusetts (hereinafter referred to as the University).

WHEREAS, the University is the owner of certain real property located at 240 Beaver Street in Waltham and further described in Section 2 of this Agreement; and

WHEREAS, the University is responsible for the care, control and maintenance of said real property; and

WHEREAS, Licensee desires to enter upon said real property for the purposes described in this Agreement;

NOW, THEREFORE, the University hereby grants such entry and use subject to the following terms and conditions:

1. REFERENCE DATA:

Date of Agreement: July 31, 2018

Mailing Address of University:

Evan Pacosa  
318D Stockbridge Hall  
University of Massachusetts  
Amherst, MA 01003

Mailing Address of Licensee:

Stacey Daley, ~~Interim~~ Executive Director  
Waltham Fields Community Farm  
240 Beaver Street  
Waltham, MA 02453

Premises: Use of 8.25 acres of farm land, five offices, storage room, plus the land for two greenhouses (see #7 below).

Permitted Use: The farm land will be used to grow, harvest and distribute food as identified in the mission of this organization. CFO will provide the heat for the greenhouses.

2. LOCATION OF THE PREMISES

Entry and use are limited to the premises located at See # 7 below.

3. PURPOSE AND USE

The rights of Licensee under this agreement shall be exercised solely for the following purposes: The farm land will be used to harvest, sell, and distribute food consistent with the mission of this organization. The direct sale of farm products will be limited to the normal seasonal hours of distribution of CSA farm shares to members. A portion of the produce will be provided to people in need of food assistance. The land is also used to for education for school and camp groups, as well as for the general public.

Specific rules governing access to and use of these facilities are attached as **Exhibit B** and are binding upon both parties.

4. CONDITION OF PREMISES

Licensee acknowledges and agrees that it accepts the Premises in "as is" condition, that Licensor is under no obligation to make any repairs, renovations, or alterations to the Premises, and that the University has made no representations or warranties regarding the fitness of the Premises for Licensee's intended purpose or use.

5. TERM

Term of Agreement: July 1, 2018 to December 31, 2019 unless otherwise terminated earlier in accordance with the terms of this Agreement.

The term of this Agreement may be extended on the following terms, subject to the prior written approval of the University: This Agreement will be reviewed annually on the anniversary date or date mutually agreeable to both parties.

This Agreement is revocable at any time upon thirty (30) days' written notice from either party to the other.

6. HOURS OF OPERATION

During the term of this Agreement, Licensee shall be permitted to operate and use the Premises for the purposes set forth in Section 3 and described in **Exhibit B**.

7. FEE

In consideration of the rights granted to Licensee under this agreement, Licensee shall pay the following Fee:

Two offices: rooms 7 & 8	\$7,500
Two offices: rooms 9 & 10	\$5,250
One office: room 1	\$5,250
Store room # 2	\$900
Land and utilities for two greenhouses	\$4,500
Eight and one quarter (8.25) acres of land	<u>\$7,425</u>
Total	<u>\$30,825</u>

#### 8. PERMITS

This agreement and all obligations hereunder are specifically dependent upon the issuance to the Licensee of all permits and licenses required to operate and use the Premises for the purposes described in this Agreement from those governmental agencies having jurisdiction. It shall be the responsibility of Licensee to obtain any such permits or licenses, at Licensee's sole cost and expense. In the event Licensee is refused any such permit or license, this agreement shall be null and void with no further obligation by either party to perform. If any such permit or license is revoked or canceled during the term of this Agreement, it shall be cause for terminating this Agreement immediately as set forth in Section 18(c) hereof.

#### 9. ALTERATION OF THE PREMISES

Licensee shall make no alterations or improvements upon the Premises except as may be specifically permitted in a separate Schedule attached to this License as **Exhibit C**. If no such Schedule is attached, Licensee shall not make any alterations or improvements upon the Premises after this Agreement has commenced unless Licensee has obtained the University's prior written approval, which may be withheld for any reason or for no reason in the University's sole discretion. Any alterations or improvements made by Licensee shall be made in accordance with the terms and conditions established by the University, which may include prior approval of plans, insurance coverage, and a requirement that Licensee remove any or all of its alterations or improvements upon the expiration or earlier termination of this Agreement. All such alterations or improvements remaining upon the Premises after the expiration or this License shall be subject to the provisions of Section 12 hereof. In any event, this Agreement does not for any purpose constitute the granting of an interest in real property and Licensee shall not have any right to make any permanent improvements to, or to install any permanent fixtures on, the Premises.

#### 10. LICENSEE'S EQUIPMENT

Licensee may bring such vehicles and other equipment upon the premises as should ordinarily be used to operate and use the Premises for the purposes permitted by this Agreement, subject, however, to the following limitations outlined in **Exhibit B**.

#### 11. UTILITIES

The University shall provide janitorial services for common areas of the buildings and



general maintenance of the buildings and grounds. Heat, electric, water and sewer utilities are provided for the facilities as needed.

The University makes no representation as to the adequacy of utility systems for purposes of Licensee and shall not be responsible for any interruption in utility service.

## 12. CONDUCT OF LICENSEE

### Non-interference with University Operations

Licensee shall at all times conduct itself so as not to interfere in any way with the operation of the University facility. Licensee agrees to observe and obey all directives given by duly designated personnel of the University.

### Compliance with Laws

Licensee shall at all times operate within the premises in accordance with all applicable laws, statutes, ordinances, regulations, permits, licenses, and requirements of its insurance policies.

### Repair of Damage

Licensee shall neither cause nor suffer any waste of the premises and shall maintain the premises in good order at all times. The Licensee's responsibilities shall include, but not be limited to, the repair of any and all damage or breakage resulting from acts of vandalism or the intentional or negligent acts of the Licensee or others, but excluding damage or breakage caused by employees, agents or invitees of the University. All repairs made by Licensee shall be performed in a manner satisfactory to the University.

### Sanitation

Licensee shall maintain the Premises in a sanitary condition and shall follow all directions of the University with regard to the collection and disposal of refuse as provided in **Exhibit B**.

### Security

Licensee shall be responsible for providing, at its sole cost and expense, such security protection or services as may be reasonably necessary to protect the premises and Licensee's invitees from injury or damage.

### Cost of Operations

Except as otherwise expressly set forth in this Agreement, Licensee shall be responsible for any and all costs and expenses associated with the exercise of its rights under this Agreement and its operations upon the Premises.

### Operations Limited to Permitted Uses

Licensee shall not conduct, nor permit any of its employees, agents or invitees to conduct, any operations or business upon the Premises except for that permitted by Section 3 of this Agreement.

### Hazardous Materials

Without limiting any of Licensee's obligations under this or any other Section of this Agreement, Licensee agrees that it shall not cause any hazardous materials to be used, generated, stored or disposed of on, under or about, or transported to or from the premises. For the purposes of this Agreement, "hazardous materials" shall include, but not be limited to substances defined as "hazardous substances", "toxic substances", "hazardous wastes", "hazardous materials", or "oil" in any federal or state statute concerning hazardous materials now or hereafter enacted, including all regulations adopted or publications promulgated thereunder.

Licensee's involved in research and plant propagation may use licensed pesticides, subject to all regulations. Plans for use and storage must be approved annually by Robert Schrader.

### Alcoholic Beverages

Unless specifically permitted by the terms of this Agreement, Licensee shall not serve alcoholic beverages upon the Premises, nor allow any of its employees, agents, contractors or invitees to bring or consume alcoholic beverages upon the Premises.

### Surrender of Premises

Upon the expiration or earlier termination of this Agreement, Licensee shall immediately vacate and surrender the Premises to the University. However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises. Licensee shall also remove all of its property from the Premises and restore the Premises to the condition the Premises were in at the commencement of this Agreement, reasonable wear and tear excepted, and subject further to any obligation Licensee may have hereunder to make repairs or improvements to the Premises. Upon agreement of the parties, Licensee may abandon all or part of its property in place. In the event any of Licensee's personal property remains on the Premises after the expiration or earlier termination of this Agreement without a written agreement between the parties, said property shall be deemed abandoned and may be retained by University without any compensation to Licensee, or may be removed and either stored or disposed of by the University at the sole cost and expense of Licensee.

### 13. INDEMNIFICATION

Not Applicable

### 14. RISK OF LOSS

Licensee agrees that it shall use and occupy the Premises at its own risk, and the University shall not be liable to Licensee for any loss or damage to vehicles, equipment, fixtures, or other personal property of the Licensee that are brought upon the Premises. Without limiting the foregoing, the University shall have no liability to Licensee for any injury, loss or damage

caused by any act of Licensee's invitees or members of the general public.

15. INSURANCE

The Licensee shall keep in force, at its sole cost and expense, during the full term of this License, and during such other times as Licensee occupies the Premises or any part thereof, the following insurance policies:

- A. Comprehensive public liability insurance in an amount as required by Massachusetts law.
- B. Vehicle Liability Insurance covering each vehicle of Licensee entering the Premises in an amount as required by Massachusetts law.
- C. Workers Compensation Insurance covering Licensee's employees upon the Premises in such amounts as are required by law.
- D. Such other types of insurance and in such amounts as the University may, from time to time, require in its reasonable judgment.

One or more certificates of insurance showing insurance coverage as required by this Section 15 are attached to this license as Exhibit D.

The insurance coverage required by this Section shall be by standard policies, obtained from financially sound and responsible insurance companies authorized to do business in Massachusetts. In the event Licensee fails to obtain any of the insurance coverage required by this section, or if any of the required insurance policies are canceled, it shall be grounds for immediate termination of this Agreement as provided in Section 18(c) of this agreement.

16. ASSIGNMENT

The Licensee shall not sell, assign, sublet, mortgage or transfer any interest in this Agreement or any part of the Premises without obtaining, in each instance, the prior written consent of the University, which consent may be withheld for any reason or for no reason, or granted upon such conditions as the University shall determine, all in its sole discretion.

17. RIGHTS OF UNIVERSITY AND AGENCY TO ENTER

The University reserves the right and the Licensee shall permit the University or its employees or agents to enter upon the Premises at any time to make repairs, perform maintenance, inspect the Premises, show the Premises to others, monitor compliance with this Agreement, or for any other reason.

18. TERMINATION

This Agreement shall expire on the date specified in Section 5, unless extended in compliance with the terms of this Agreement and all other requirements of law, or unless terminated earlier under the following conditions:

A. Without Cause. Either Licensee or the University may terminate this Agreement by giving written notice to the other party at least thirty (30) calendar days prior to the effective date of termination stated in the notice.

B. For Cause. If, in the opinion of University, Licensee fails to fulfill its obligations, The University may terminate this Agreement by giving written notice to the Licensee at least five (5) calendar days before the effective date of termination stated in the notice. The notice shall specify in reasonable detail the nature of Licensee's breach. The notice may also state a period during which the breach may be cured by Licensee, provided that such period shall expire on or before the termination date stated in the notice. In the event the Licensee is given an opportunity to cure its breach (which shall be within the sole discretion of the University) and Licensee fails to complete such cure to the satisfaction of the University within the cure period, this Agreement shall come to an end on the termination date stated in the notice.

C. Emergency. In the event the University determines that it is necessary to terminate this Agreement or suspend Licensee's rights hereunder immediately in order to prevent injury or damage to persons or property, including the interest of the University in the Premises, the University may terminate this Agreement or suspend Licensee's rights hereunder by providing written notice to Licensee stating the grounds for said termination or suspension. Said notice may be given in the form of a telegram, mailgram, hand-carried letter, or other reasonable written means, and this License shall be terminated or suspended, as the case may be, upon delivery of said notice to Licensee.

In the event this Agreement is terminated in accordance with any of the provisions of this Section 18, this Agreement shall come to an end as fully and completely as if the term had expired on the date set forth in Section 5, and Licensee shall vacate and surrender the Premises as provided in Section 12.

In the event this Agreement is terminated by the University in accordance with any of the provisions of this Section 18, Licensee shall not be relieved of liability to the University for arrears in the License fees or for any other injury or damage sustained by the University as a result of a breach of Licensee of any of the terms or conditions of this Agreement, whether occurring before or after such termination. Licensee expressly waives any right to damages related to such termination, including incidental or consequential damages. If this Agreement is terminated for any reason that is not the fault of Licensee, then the fee which the Licensee has covenanted to pay, if any, shall be commensurately reduced by the University on a pro rata per diem basis, and Licensee shall receive a refund of any portion of the Agreement Fee that has been prepaid for a period during which the Licensee was denied use and occupancy of the Premises.

#### 19. NO ESTATE CREATED

This Agreement shall not be construed as creating or vesting in Licensee any estate in the Premises, but only the limited right of possession as herein described, and Licensee shall have no right to require specific performance of the obligation of the University hereunder.

20. NON-DISCRIMINATION

Licensee shall not discriminate against any qualified employee, applicant for employment, subcontractor, or person or firm seeking to provide goods or services to Licensee, nor shall Licensee deny any person access to the Premises or to any activities or programs carried out pursuant to this Agreement because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation. The Licensee shall comply with all applicable federal and state statutes, rules, and regulations prohibiting discrimination in employment.

21. NOTICE

All notices or other communications required or permitted to be given under this Agreement shall, unless otherwise expressly permitted hereunder, be in writing signed by a duly authorized representative of the party giving the notice and shall be given by hand delivery (including, without limitation, courier, Federal Express, or other overnight delivery service) or mailed by United States certified mail, postage prepaid, return receipt requested. Such notices shall be sent or addressed to the University and Licensee at the addresses set forth in Section 1.

22. MISCELLANEOUS PROVISIONS

This Agreement may not be modified except in writing, duly executed by both parties.

This Agreement contains the entire agreement of the parties and there are no other agreements or understandings between the parties regarding the subject matter of this Agreement.

The University, its employees, officers or agents, are not authorized to bind or involve the Licensee or the Commonwealth of Massachusetts in any contract or to incur any liability for or on the part of the Licensee or the Commonwealth of Massachusetts.

If any portion of this Agreement is declared to be illegal, unenforceable or void, then all parties to this Agreement shall be relieved of all obligations under that portion; provided, however, that the remainder of this agreement shall be enforced to the fullest extent permitted by law.

No consent or waiver, whether express or implied, by the University to or of any breach of the terms of this Agreement by Licensee shall be construed as a consent or waiver to or of any other breach. No waiver of any breach or default or other indulgence shall be effective unless expressed in writing by the University.

The captions in this Agreement are inserted for convenience of reference only and in no way define, describe or limit the scope or intent of this Agreement or any of the provisions hereof.

**Staff Services:** University staff are responsible for operation and maintenance of the facility. University staff do not provide plant production or administrative services. Each organization must provide their own labor and related services.

**Rubbish and Organic Materials Removal:** Licensee is responsible for removing rubbish and recyclable materials to dumpsters and/or receptacles for recycling. Plant waste and related organic materials are to be discarded in areas identified by the facility manager.

**Site Maintenance & Appearance:** Assigned area must appear neat, clean, and orderly throughout the year. Refuse cannot be left at the site. End of the season clean-up is required. Details for clean-up and closing of land operations will be provided.

**Water and Utilities:** Water is generally provided to each site. Water conservation must be practiced. Water leaks are to be reported to the Facility Manager. All groups using more than an acre of land and the community garden group (GROW) will provide their own water meter in order to monitor use. The University will limit water use as deemed necessary.

**Alterations and Changes in Use of the Land:** The land can only be used for the purpose stated in the application form and Agreement. Any changes in use or changes to the land or landscape must be requested in writing to the Facility Manager. This includes pruning any surrounding trees or shrubs and adding structures, fencing, trellises or related items.

**Signage:** Small descriptive signs are to be posted at the site, identifying the organization, use of the land (purpose) and contact person for further information.

**Contacts and Communications:** All issues related to building and facility use should be brought to the attention of the Facility Manager, Tony Mazzeo.

Joe Shoenfeld

Associate Director, UMass Center for Agriculture, Food and the Environment

July, 2018

No official, employee or consultant of the Commonwealth of Massachusetts (including any Trustee of the University of Massachusetts) shall be personally liable to Licensee or to any person claiming under or through Licensee for or on account of any alleged breach of this Agreement, or for any act, failure to act or other matter arising out of the execution of this Agreement or the performance of Licensee's obligations hereunder.

This Agreement shall be governed by, and construed in accordance with the laws of the Commonwealth of Massachusetts, and any and all legal actions brought in connection with this Agreement shall be brought in courts within the Commonwealth of Massachusetts.

No provision of this Agreement shall be deemed to have been waived by either party unless such waiver is in writing and is signed by the party to be charged.

This Agreement is to take effect as a sealed instrument.

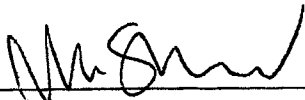
The following exhibits and attachments are made a part of this Agreement for all purposes:

- Exhibit A - Plan or Diagram of Premises to be Utilized by Licensee
- X   Exhibit B - Specific Rules Governing Access and Use of Facility
- Exhibit C - Schedule of Permitted Alterations and Improvements
- X   Exhibit D - Insurance Certificate(s)

#### AGREED AND ACCEPTED

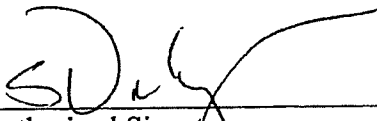
**UNIVERSITY OF  
MASSACHUSETTS:**

**LICENSEE:**

  
\_\_\_\_\_  
Signature

Joe Shoenfeld, Associate Director  
Center for Agriculture, Food and the  
Environment  
University of Massachusetts

9/28/18  
Date

  
\_\_\_\_\_  
Authorized Signature

Stacey Daley, ~~Interim~~ Executive Director  
Community Farms Outreach

10/15/18  
Date



# CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)  
08/02/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Aon Risk Services Northeast, Inc. Providence RI Office 100 Westminster Street, 10th Floor Providence RI 02903-2393 USA	<b>CONTACT</b> NAME:	
	PHONE (A/C. No. Ext.): (866) 283-7122	FAX (A/C. No.): (800) 363-0105
<b>INSURED</b> University of Massachusetts 333 South Street, Suite 450 Shrewsbury MA 01545 USA	<b>E-MAIL ADDRESS:</b>	
	<b>INSURER(S) AFFORDING COVERAGE</b>	
	<b>NAIC #</b>	
	<b>INSURER A:</b> United Educators Ins, a Reciprocal RRG 10020	
	<b>INSURER B:</b>	
	<b>INSURER C:</b>	
<b>INSURER D:</b>		
<b>INSURER E:</b>		
<b>INSURER F:</b>		

Holder Identifier:

Certificate No.: 570072551874



**COVERAGES** **CERTIFICATE NUMBER: 570072551874** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBRI WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER			U4075A SIR applies per policy terms & conditions	05/01/2018	05/01/2019	EACH OCCURRENCE \$750,000 DAMAGE TO RENTED PREMISES (Ea occurrence) Included MED EXP (Any one person) Excluded PERSONAL & ADV INJURY Included GENERAL AGGREGATE \$3,000,000 PRODUCTS - COMPIOP AGG Included SIR \$250,000
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
A	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$1,000,000			U4075A	05/01/2018	05/01/2019	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A				PER STATUTE E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

## CERTIFICATE HOLDER

## CANCELLATION

Community Farms Outreach Attn: Shannon Taylor 240 Beaver Street Waltham MA 02452 USA	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE  <i>Aon Risk Services Northeast Inc.</i>



Amended version 9/25/18 of Attachment to License Agreement with Waltham Fields Community Farm, per Joe Shoenfeld.

 9/25/18

**Exhibit B      Use of Grounds and Land at UMass Waltham, 240 Beaver Street,  
Waltham, Mass.**

**Specific Rules Governing Access To and Use of Facility**

The following rules apply to use of the facility. All communications related to compliance with use rules and requests for permitted variances should be directed to Facility Manager (Tony Mazzeo) at the facility.

**General Rules:**

**Civility and Adherence to Rules:** Licensees are responsible for actions of their staff, guests and general public invited onto premises. Licensee is responsible for ensuring compliance with all facility rules.

**Hours of Operation:** Facility is open to licensees and their guests. The building is accessible from 6 AM-11 PM. Outside grounds are accessible from 6 AM till dark.

**Parking:** Parking is generally available in lots surrounding the building. No parking is allowed on the grass without prior approval. No vehicles are to be left overnight without prior approval.

**Persons Authorized to Have Access to Facility:** Each licensee is to provide to the Facility Manager a list of persons who will have regular access to the facility. All persons having regular access to the building must be over the age of 6. For persons utilizing space within the buildings this list will specifically identify those who are to receive building keys.

**Special Events:** Special events, such as plant sales, shows, educational programs and community events, which will use additional areas of the facility are permitted, subject to the approval of the University. Use of the facility can be scheduled through the Facility Manager. Additional fees may be charged to cover related costs to the University, such as staff time, rubbish removal, etc.

**Operational Rules for Organizations Using the Grounds and Land**

**Facility Access:** The grounds are open to licensees from 6 AM - dark. Cars are to be driven onto grass areas only to load and unload materials or for handicapped access. Parking areas for handicapped access will be identified in advance.

**Staff Services:** University staff are responsible for operation and maintenance of the facility. University staff do not provide plant production or administrative services. Each organization must provide their own labor and related services.

**Rubbish and Organic Materials Removal:** Licensee is responsible for removing rubbish and recyclable materials to dumpsters and/or receptacles for recycling. Plant waste and related organic materials are to be discarded in areas identified by the facility manager.

**Site Maintenance & Appearance:** Assigned area must appear neat, clean, and orderly throughout the year. Refuse cannot be left at the site. End of the season clean-up is required. Details for clean-up and closing of land operations will be provided.

**Water and Utilities:** Water is generally provided to each site. Water conservation must be practiced. Water leaks are to be reported to the Facility Manager. All groups using more than an acre of land and the community garden group (GROW) will provide their own water meter in order to monitor use. The University will limit water use as deemed necessary.

**Alterations and Changes in Use of the Land:** The land can only be used for the purpose stated in the application form and Agreement. Any changes in use or changes to the land or landscape must be requested in writing to the Facility Manager. This includes pruning any surrounding trees or shrubs and adding structures, fencing, trellises or related items.

**Signage:** Small descriptive signs are to be posted at the site, identifying the organization, use of the land (purpose) and contact person for further information.

**Contacts and Communications:** All issues related to building and facility use should be brought to the attention of the Facility Manager, Tony Mazzeo.

Joe Shoenfeld

Associate Director, UMass Center for Agriculture, Food and the Environment

July, 2018



The Center for  
Agriculture,  
Food and the  
Environment

UMass Extension  
Mass. Water Resources Research Center  
Mass. Agricultural Experiment Station  
UMass Research and Education Farms

Office of the Director • Stockbridge Hall • 80 Campus Center Way • Amherst, MA 01003-9246 • p: 413.545.4800 • f: 413.545.6555 • ag.umass.edu

July 26, 2018

Ms. Shannon Taylor  
Executive Director  
Community Farms Outreach  
240 Beaver Street  
Waltham, MA 02452

Dear Shannon,

Enclosed please find a license agreement for land and offices at Waltham for the period of July 1, 2018 – June 30, 2019.

The rental rates reflected in the License Agreement follow:

Two offices: rooms 7 & 8	\$5000
Two offices: rooms 9 & 10	\$3,500
One office: room 1	\$3,500
Store room # 2	\$600
Land and utilities for two greenhouses	\$3,000
Eight and one quarter (8.25) acres of land	\$4,950
Total	<u>\$20,550</u>

Please note that there is a copy of Exhibit B attached to this agreement. Please note that the only substantive change to this document from the past is the addition, in the fourth rule listed, of the sentence: "All persons having regular access to the building must be over the age of 18."

Please sign and return one copy of the license agreement to me along with a copy of insurance certificates for liability and workman's compensation (if applicable). An invoice will then be sent from our business office.

Please let me know if you have any questions regarding the license or invoice information.

Sincerely,

Evan Pacosa  
College of Natural Sciences  
Business Office

UMASS  
AMHERST

The Center for Agriculture, Food and the Environment and its units are equal opportunity providers and employers, United States Department of Agriculture cooperating. Contact your local Extension office for information on disability accommodations. Contact the State Center Director's Office if you have concerns related to discrimination, 413-545-4800 or see [ag.umass.edu/civil-rights-Information/civil-rights-information-resources](http://ag.umass.edu/civil-rights-Information/civil-rights-information-resources).

October 15, 2018

Evan Pacosa  
College of Natural Sciences  
Business Office  
UMass Amherst



Dear Evan,

Enclosed please find a copy of the signed license agreement for Community Farms Outreach, d/b/a Waltham Fields Community Farm for the period of July 1, 2018 - December 31, 2019.

Also enclosed, please find:

- Payment in the amount of \$20,550.00 for the period of July 1, 2018 - June 30, 2019
- A certified and signed invoice from UMass for the period of July 1, 2018 - June 30, 2019  
An invoice for 2019 rental of office space, storage space and land usage for the period of July 1, 2019 to December 31, 2019 will be invoiced by the University in June 2019 (as agreed).
- Certificate of Liability Insurance

Thank you for your assistance with the previous revisions of this agreement.

Be well,



Stacey Daley  
Executive Director  
stacey@communtiyfarms.org

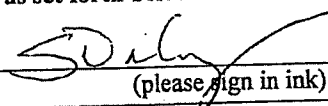


# University of Massachusetts /Amherst

## Invoice

**e\*mpac**  
Enterprise Management and Performance  
Through Administrative Computing

DEPARTMENT: <u>Center of Agriculture</u> <u>318D Stockbridge Hall</u> <u>80 Campus Center Way</u> BUILDING: <u>Amherst, Ma 01003</u>	Purchase Order #: <u>N/A</u>
ATTN: <u>Evan Pacosa</u> <u>413-545-2262</u>	Vendor's Code: <u>N/A</u>
	Invoice #: <u>07012018</u>
	Date: <u>10/01/2018</u>

Name and Address Of Vendor:	Community Farms Outreach aka Waltham Fields c/o Stacey Daley 240 Beaver Street Waltham, MA 02452	Vendor's Certification: I certify that the goods were shipped or the services Rendered as set forth below.   (please sign in ink)
-----------------------------	--	--

DESCRIPTION	AMOUNT
Rental office space, storage space and land usage located at UMass Waltham Center, 240 Beaver Street for the period of July 1, 2018 to June 30, 2019. Consideration to be paid by licensee, \$20,550.00 per year.	\$20,550.00
<i>Please make checks payable to the University of Massachusetts.</i>	
Total Due	\$20,550.00

*pd by check 10/15/18 # 7998 in full*

Acct:	Fund:	Dept. ID:	Speed #	Class:	Project/Grant
-------	-------	-----------	---------	--------	---------------

Date Goods Received:	Verified By:
----------------------	--------------

Departmental Approval:
------------------------

Original-Controllers

Copy-Department

06/26/02



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
08/15/2018

CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER <b>FRANK BINGHAM</b> 1408 PROVIDENCE HWY SUTIE-130 NORWOOD, MA 02062	CONTACT NAME: PHONE (A/C No. Ext): <b>781-255-2002</b> FAX (A/C No.): <b>781-255-1874</b> E-MAIL ADDRESS: <b>FRANK.BINGHAM@VERIZON.NET</b>
INSURED <b>COMMUNITY FARMS OUTREACH</b> 240 BEAVER STREET WALTHAM, MA 02452-8022	INSURER(S) AFFORDING COVERAGE INSURER A: <b>FARM FAMILY CASUALTY</b> INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:

**COVERAGES** **CERTIFICATE NUMBER:** **REVISION NUMBER:**  
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

NR	TYPE OF INSURANCE	ADDL. SUBR. INSR. WYD.	POLICY NUMBER	POLICY EFF. (MM/DD/YYYY)	POLICY EXP. (MM/DD/YYYY)	LIMITS
	<b>GENERAL LIABILITY</b> <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRC. <input type="checkbox"/> LOC					EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Per occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMPROP AGG \$ \$
	<b>UTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS		2001C40094A	04/21/2018	04/21/2019	COMBINED SINGLE LIMIT (Per accident) \$ BODILY INJURY (Per person) \$ 250,000 BODILY INJURY (Per accident) \$ 500,000 PROPERTY DAMAGE (Per accident) \$ 100,000 \$
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE  DED. RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$ \$
A	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/ MEMBER EXCLUDED? (Mandatory in MA) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/> M/A	2009W6296	03/16/2018	03/16/2019	WC STATUTORY LIMITS OTHER E.L. EACH ACCIDENT \$ 100,000 E.L. DISEASE - EA EMPLOYEE \$ 100,000 E.L. DISEASE - POLICY LIMIT \$ 500,000
A	<b>SPECIAL FARM PACKAGE</b>		2009G1699	04/25/2018	04/25/2019	FARM LIABILITY PER OCC \$1,000,000 AGGREGATE \$2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

<b>CERTIFICATE HOLDER</b>  <b>UNIVERSITY OF MASSACHUSETTS</b> 333 SOUTH STREET, SUITE #450 SHREWSBURY, MA 01545 USA	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE <i>Francis E. Bingham</i>
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## SECOND EXTENSION OF LICENSE AGREEMENT

This Second Extension of License Agreement ("Second Extension") is made on December 15, 2020 by and between the University of Massachusetts Amherst ("University") and the Federation of Massachusetts Farmers Markets ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 1, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. Section 5 (TERM): The term of the Agreement shall be extended on a month-to-month basis, terminable by Licensor or Licensee upon thirty (30) days' prior written notice to the other party.
2. Section 7 (FEE): In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to the University a fee in the amount of Six Hundred Sixty-six Dollars and Sixty-seven cents (\$666.67) per month.
3. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Second Extension as of the date first written above.

**UNIVERSITY:**  
UNIVERSITY OF MASSACHSETTS

By: Andrew P. Mangels

Name: Andrew P. Mangels

Title: Vice Chancellor for Administration and Finance

**LICENSEE:**  
FEDERATION OF MASSACHUSETTS FARMERS MARKETS

By: Edith Murnane

Name: Edith Murnane

Title: Executive Director











# FMFM - Extension 2

Final Audit Report

2021-01-04

Created:	2020-12-29
By:	Mass Farmers Markets (tech@massfarmersmarkets.org)
Status:	Signed
Transaction ID:	CBJCHBCAABAawmWRlxvCv4VR9BUZ2k9yfBqvyhB2xM4G

## "FMFM - Extension 2" History

-  Document created by Mass Farmers Markets (tech@massfarmersmarkets.org)  
2020-12-29 - 4:22:48 PM GMT- IP address: 209.6.177.253
-  Document emailed to dmarshall@facil.umass.edu for signature  
2020-12-29 - 4:23:57 PM GMT
-  Email viewed by dmarshall@facil.umass.edu  
2021-01-04 - 3:10:26 PM GMT- IP address: 128.119.185.194
-  Document signing delegated to Andrew Mangels (amangels@admin.umass.edu) by dmarshall@facil.umass.edu  
2021-01-04 - 3:20:46 PM GMT- IP address: 128.119.185.194
-  Document emailed to Andrew Mangels (amangels@admin.umass.edu) for signature  
2021-01-04 - 3:20:47 PM GMT
-  Email viewed by Andrew Mangels (amangels@admin.umass.edu)  
2021-01-04 - 6:18:57 PM GMT- IP address: 24.62.200.107
-  Document e-signed by Andrew Mangels (amangels@admin.umass.edu)  
Signature Date: 2021-01-04 - 6:19:22 PM GMT - Time Source: server- IP address: 24.62.200.107
-  Agreement completed.  
2021-01-04 - 6:19:22 PM GMT

### FIRST EXTENSION OF LICENSE AGREEMENT

This First Extension of License Agreement ("First Extension") is made on October 15, 2020 by and between the University of Massachusetts Amherst ("University") and the Federation of Massachusetts Farmers Markets ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 1, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. Section 1 (REFERENCE DATA) of the Agreement shall be modified by inserting the following text on its own line after the words "Room 374": "*181 Presidents Drive*", into the Mailing Address of the University.
2. Section 1 (REFERENCE DATA) is hereby amended by adding room 124 to the Premises listing.
3. Section 5 (TERM): The term of the Agreement shall be extended through December 31, 2020.
4. Section 7 (FEE): In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to the University a fee in the amount of Eight Thousand and 00/100 Dollars (\$8,000.00), payable in advance in monthly installments of Six Hundred Sixty-six Dollars and Sixty-seven cents (\$666.67) per month.
5. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first written above.

**UNIVERSITY:**  
UNIVERSITY OF MASSACHUSETTS

DocuSigned by:  
By: Andrew P. Mangels  
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

**LICENSEE:**  
FEDERATION OF MASSACHUSETTS FARMERS MARKETS

By: Edith Murnane  
Name: Edith ~~Murnane~~ MURNANE  
Title: Executive Director

## **Agreement and Conditions for Use of Office Facilities at the UMass Waltham Center**

This Agreement provides conditions for use of office space at the UMass Eastern Massachusetts Outreach Center. This agreement is between Federation of Massachusetts Farmers' Markets (hereinafter Licensee), and the University of Massachusetts (hereinafter referred to as the University).

WHEREAS, the University is the owner of certain real property located at 240 Beaver Street in Waltham and further described in Section 2 of this Agreement; and

WHEREAS, the University is responsible for the care, control and maintenance of said real property; and

WHEREAS, Licensee desires to enter upon said real property for the purposes described in this Agreement;

NOW, THEREFORE, the University hereby grants such entry and use subject to the following terms and conditions:

1. REFERENCE DATA:

Date of Agreement: July 31, 2018

Mailing Address of University:

Evan Pacosa  
318D Stockbridge Hall  
University of Massachusetts  
Amherst, MA 01003

Mailing Address of Licensee:

Jeffery Cole, Executive Director  
Federation of Massachusetts Farmers' Markets  
240 Beaver Street  
Waltham, MA 02453

Premises: Room # 123, 125, & 214 in the Main Administration Building

Permitted Use: Rooms to be used as an office to conduct FMFM business.

Term of Agreement: One Year

Consideration to be paid by Licensee: \$8,000.00

2. LOCATION OF THE PREMISES

Entry and use are limited to the premises located at See # 7 below.

3. PURPOSE AND USE

The rights of Licensee under this agreement shall be exercised solely for the following purposes: The farm land will be used to harvest, sell, and distribute food consistent with the mission of this organization. The direct sale of farm products will be limited to the normal seasonal hours of distribution of CSA farm shares to members. A portion of the produce will be provided to people in need of food assistance. The land is also used to for education for school and camp groups, as well as for the general public.

Specific rules governing access to and use of these facilities are attached as **Exhibit B** and are binding upon both parties.

4. CONDITION OF PREMISES

Licensee acknowledges and agrees that it accepts the Premises in "as is" condition, that Licensor is under no obligation to make any repairs, renovations, or alterations to the Premises, and that the University has made no representations or warranties regarding the fitness of the Premises for Licensee's intended purpose or use.

5. TERM

Term of Agreement: July 1, 2018 to June 30, 2019 unless otherwise terminated earlier in accordance with the terms of this Agreement.

The term of this Agreement may be extended on the following terms, subject to the prior written approval of the University: This Agreement will be reviewed annually on the anniversary date or date mutually agreeable to both parties.

This Agreement is revocable at any time upon thirty (30) days' written notice from either party to the other.

6. HOURS OF OPERATION

During the term of this Agreement, Licensee shall be permitted to operate and use the Premises for the purposes set forth in Section 3 and described in **Exhibit B**.

7. FEE

In consideration of the rights granted to Licensee under this agreement, Licensee shall pay the following Fee:

\$8,000 for use of Room # 123, 125, & 214 in the Main Administration Building.

8. PERMITS

This agreement and all obligations hereunder are specifically dependent upon the issuance to the Licensee of all permits and licenses required to operate and use the Premises for the purposes described in this Agreement from those governmental agencies having jurisdiction. It shall be the responsibility of Licensee to obtain any such permits or licenses, at Licensee's sole cost and expense. In the event Licensee is refused any such permit or license, this agreement shall be null and void with no further obligation by either party to perform. If any such permit or license is revoked or canceled during the term of this Agreement, it shall be cause for terminating this Agreement immediately as set forth in Section 18(c) hereof.

9. ALTERATION OF THE PREMISES

Licensee shall make no alterations or improvements upon the Premises except as may be specifically permitted in a separate Schedule attached to this License as **Exhibit C**. If no such Schedule is attached, Licensee shall not make any alterations or improvements upon the Premises after this Agreement has commenced unless Licensee has obtained the University's prior written approval, which may be withheld for any reason or for no reason in the University's sole discretion. Any alterations or improvements made by Licensee shall be made in accordance with the terms and conditions established by the University, which may include prior approval of plans, insurance coverage, and a requirement that Licensee remove any or all of its alterations or improvements upon the expiration or earlier termination of this Agreement. All such alterations or improvements remaining upon the Premises after the expiration of this License shall be subject to the provisions of Section 12 hereof. In any event, this Agreement does not for any purpose constitute the granting of an interest in real property and Licensee shall not have any right to make any permanent improvements to, or to install any permanent fixtures on, the Premises.

10. LICENSEE'S EQUIPMENT

Licensee may bring such vehicles and other equipment upon the premises as should ordinarily be used to operate and use the Premises for the purposes permitted by this Agreement, subject, however, to the following limitations outlined in **Exhibit B**.

11. UTILITIES

The University shall provide janitorial services for common areas of the buildings and general maintenance of the buildings and grounds. Heat, electric, water and sewer utilities are provided for the facilities as needed.

The University makes no representation as to the adequacy of utility systems for purposes of Licensee and shall not be responsible for any interruption in utility service.

12. CONDUCT OF LICENSEE

#### Non-interference with University Operations

Licensee shall at all times conduct itself so as not to interfere in any way with the operation of the University facility. Licensee agrees to observe and obey all directives given by duly designated personnel of the University.

#### Compliance with Laws

Licensee shall at all times operate within the premises in accordance with all applicable laws, statutes, ordinances, regulations, permits, licenses, and requirements of its insurance policies.

#### Repair of Damage

Licensee shall neither cause nor suffer any waste of the premises and shall maintain the premises in good order at all times. The Licensee's responsibilities shall include, but not be limited to, the repair of any and all damage or breakage resulting from acts of vandalism or the intentional or negligent acts of the Licensee or others, but excluding damage or breakage caused by employees, agents or invitees of the University. All repairs made by Licensee shall be performed in a manner satisfactory to the University.

#### Sanitation

Licensee shall maintain the Premises in a sanitary condition and shall follow all directions of the University with regard to the collection and disposal of refuse as provided in **Exhibit B**.

#### Security

Licensee shall be responsible for providing, at its sole cost and expense, such security protection or services as may be reasonably necessary to protect the premises and Licensee's invitees from injury or damage.

#### Cost of Operations

Except as otherwise expressly set forth in this Agreement, Licensee shall be responsible for any and all costs and expenses associated with the exercise of its rights under this Agreement and its operations upon the Premises.

#### Operations Limited to Permitted Uses

Licensee shall not conduct, nor permit any of its employees, agents or invitees to conduct, any operations or business upon the Premises except for that permitted by Section 3 of this Agreement.

#### Hazardous Materials

Without limiting any of Licensee's obligations under this or any other Section of this Agreement, Licensee agrees that it shall not cause any hazardous materials to be used, generated, stored or disposed of on, under or about, or transported to or from the premises. For the purposes of this Agreement, "hazardous materials" shall include, but not be limited to substances defined as "hazardous substances", "toxic substances", "hazardous wastes", "hazardous materials", or "oil" in any federal or state statute concerning hazardous materials now or hereafter enacted, including all regulations adopted or publications promulgated thereunder.

Licensee's involved in research and plant propagation may use licensed pesticides, subject to all regulations. Plans for use and storage must be approved annually by Robert Schrader.

#### Alcoholic Beverages

Unless specifically permitted by the terms of this Agreement, Licensee shall not serve alcoholic beverages upon the Premises, nor allow any of its employees, agents, contractors or invitees to bring or consume alcoholic beverages upon the Premises.

#### Surrender of Premises

Upon the expiration or earlier termination of this Agreement, Licensee shall immediately vacate and surrender the Premises to the University. However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises. Licensee shall also remove all of its property from the Premises and restore the Premises to the condition the Premises were in at the commencement of this Agreement, reasonable wear and tear excepted, and subject further to any obligation Licensee may have hereunder to make repairs or improvements to the Premises. Upon agreement of the parties, Licensee may abandon all or part of its property in place. In the event any of Licensee's personal property remains on the Premises after the expiration or earlier termination of this Agreement without a written agreement between the parties, said property shall be deemed abandoned and may be retained by University without any compensation to Licensee, or may be removed and either stored or disposed of by the University at the sole cost and expense of Licensee.

#### 13. INDEMNIFICATION

Not Applicable

#### 14. RISK OF LOSS

Licensee agrees that it shall use and occupy the Premises at its own risk, and the University shall not be liable to Licensee for any loss or damage to vehicles, equipment, fixtures, or other personal property of the Licensee that are brought upon the Premises. Without limiting the foregoing, the University shall have no liability to Licensee for any injury, loss or damage caused by any act of Licensee's invitees or members of the general public.

#### 15. INSURANCE

The Licensee shall keep in force, at its sole cost and expense, during the full term of this License, and during such other times as Licensee occupies the Premises or any part thereof, the following insurance policies:

- A. Comprehensive public liability insurance in an amount as required by Massachusetts law.



- B. Vehicle Liability Insurance covering each vehicle of Licensee entering the Premises in an amount as required by Massachusetts law.
- C. Workers Compensation Insurance covering Licensee's employees upon the Premises in such amounts as are required by law.
- D. Such other types of insurance and in such amounts as the University may, from time to time, require in its reasonable judgment.

One or more certificates of insurance showing insurance coverage as required by this Section 15 are attached to this license as **Exhibit D**.

The insurance coverage required by this Section shall be by standard policies, obtained from financially sound and responsible insurance companies authorized to do business in Massachusetts. In the event Licensee fails to obtain any of the insurance coverage required by this section, or if any of the required insurance policies are canceled, it shall be grounds for immediate termination of this Agreement as provided in Section 18(c) of this agreement.

16. ASSIGNMENT

The Licensee shall not sell, assign, sublet, mortgage or transfer any interest in this Agreement or any part of the Premises without obtaining, in each instance, the prior written consent of the University, which consent may be withheld for any reason or for no reason, or granted upon such conditions as the University shall determine, all in its sole discretion.

17. RIGHTS OF UNIVERSITY AND AGENCY TO ENTER

The University reserves the right and the Licensee shall permit the University or its employees or agents to enter upon the Premises at any time to make repairs, perform maintenance, inspect the Premises, show the Premises to others, monitor compliance with this Agreement, or for any other reason.

18. TERMINATION

This Agreement shall expire on the date specified in Section 5, unless extended in compliance with the terms of this Agreement and all other requirements of law, or unless terminated earlier under the following conditions:

- A. Without Cause. Either Licensee or the University may terminate this Agreement by giving written notice to the other party at least thirty (30) calendar days prior to the effective date of termination stated in the notice.
- B. For Cause. If, in the opinion of University, Licensee fails to fulfill its obligations, The University may terminate this Agreement by giving written notice to the Licensee at least five (5) calendar days before the effective date of termination stated in the notice. The notice shall specify in reasonable detail the nature of Licensee's breach. The notice may also state a period

during which the breach may be cured by Licensee, provided that such period shall expire on or before the termination date stated in the notice. In the event the Licensee is given an opportunity to cure its breach (which shall be within the sole discretion of the University) and Licensee fails to complete such cure to the satisfaction of the University within the cure period, this Agreement shall come to an end on the termination date stated in the notice.

C. Emergency. In the event the University determines that it is necessary to terminate this Agreement or suspend Licensee's rights hereunder immediately in order to prevent injury or damage to persons or property, including the interest of the University in the Premises, the University may terminate this Agreement or suspend Licensee's rights hereunder by providing written notice to Licensee stating the grounds for said termination or suspension. Said notice may be given in the form of a telegram, mailgram, hand-carried letter, or other reasonable written means, and this License shall be terminated or suspended, as the case may be, upon delivery of said notice to Licensee.

In the event this Agreement is terminated in accordance with any of the provisions of this Section 18, this Agreement shall come to an end as fully and completely as if the term had expired on the date set forth in Section 5, and Licensee shall vacate and surrender the Premises as provided in Section 12.

In the event this Agreement is terminated by the University in accordance with any of the provisions of this Section 18, Licensee shall not be relieved of liability to the University for arrears in the License fees or for any other injury or damage sustained by the University as a result of a breach of Licensee of any of the terms or conditions of this Agreement, whether occurring before or after such termination. Licensee expressly waives any right to damages related to such termination, including incidental or consequential damages. If this Agreement is terminated for any reason that is not the fault of Licensee, then the fee which the Licensee has covenanted to pay, if any, shall be commensurately reduced by the University on a pro rata per diem basis, and Licensee shall receive a refund of any portion of the Agreement Fee that has been prepaid for a period during which the Licensee was denied use and occupancy of the Premises.

#### 19. NO ESTATE CREATED

This Agreement shall not be construed as creating or vesting in Licensee any estate in the Premises, but only the limited right of possession as herein described, and Licensee shall have no right to require specific performance of the obligation of the University hereunder.

#### 20. NON-DISCRIMINATION

Licensee shall not discriminate against any qualified employee, applicant for employment, subcontractor, or person or firm seeking to provide goods or services to Licensee, nor shall Licensee deny any person access to the Premises or to any activities or programs carried out pursuant to this Agreement because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation. The Licensee shall comply with all applicable federal and state statutes, rules, and regulations prohibiting discrimination in

employment.

21. NOTICE

All notices or other communications required or permitted to be given under this Agreement shall, unless otherwise expressly permitted hereunder, be in writing signed by a duly authorized representative of the party giving the notice and shall be given by hand delivery (including, without limitation, courier, Federal Express, or other overnight delivery service) or mailed by United States certified mail, postage prepaid, return receipt requested. Such notices shall be sent or addressed to the University and Licensee at the addresses set forth in Section 1.

22. MISCELLANEOUS PROVISIONS

This Agreement may not be modified except in writing, duly executed by both parties.

This Agreement contains the entire agreement of the parties and there are no other agreements or understandings between the parties regarding the subject matter of this Agreement.

The University, its employees, officers or agents, are not authorized to bind or involve the Licensee or the Commonwealth of Massachusetts in any contract or to incur any liability for or on the part of the Licensee or the Commonwealth of Massachusetts.

If any portion of this Agreement is declared to be illegal, unenforceable or void, then all parties to this Agreement shall be relieved of all obligations under that portion; provided, however, that the remainder of this agreement shall be enforced to the fullest extent permitted by law.

No consent or waiver, whether express or implied, by the University to or of any breach of the terms of this Agreement by Licensee shall be construed as a consent or waiver to or of any other breach. No waiver of any breach or default or other indulgence shall be effective unless expressed in writing by the University.

The captions in this Agreement are inserted for convenience of reference only and in no way define, describe or limit the scope or intent of this Agreement or any of the provisions hereof.

No official, employee or consultant of the Commonwealth of Massachusetts (including any Trustee of the University of Massachusetts) shall be personally liable to Licensee or to any person claiming under or through Licensee for or on account of any alleged breach of this Agreement, or for any act, failure to act or other matter arising out of the execution of this Agreement or the performance of Licensee's obligations hereunder.

This Agreement shall be governed by, and construed in accordance with the laws of the Commonwealth of Massachusetts, and any and all legal actions brought in connection with this Agreement shall be brought in courts within the Commonwealth of Massachusetts.

No provision of this Agreement shall be deemed to have been waived by either party unless such waiver is in writing and is signed by the party to be charged.

This Agreement is to take effect as a sealed instrument.

The following exhibits and attachments are made a part of this Agreement for all purposes:

       Exhibit A - Plan or Diagram of Premises to be Utilized by Licensee  
  X   Exhibit B - Specific Rules Governing Access and Use of Facility  
       Exhibit C - Schedule of Permitted Alterations and Improvements  
  X   Exhibit D - Insurance Certificate(s)

**AGREED AND ACCEPTED**

**UNIVERSITY OF  
MASSACHUSETTS:**

**LICENSEE:**

\_\_\_\_\_  
Signature

Joe Shoenfeld, Associate Director  
Center for Agriculture, Food and the  
Environment  
University of Massachusetts

\_\_\_\_\_  
Authorized Signature

Jeffery Cole, Executive Director  
Federation of Massachusetts Farmers'  
Markets

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

SECOND EXTENSION OF LICENSE AGREEMENT

This Second Extension of License Agreement ("Second Extension") is made on December 15, 2020 by and between the University of Massachusetts Amherst ("University") and Green Rows of Waltham ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

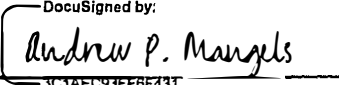
NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. TERM: The term of the Agreement shall be extended on a month-to-month basis, terminable by Licensor or Licensee upon thirty (30) days' prior written notice to the other party.
2. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of One Hundred Dollars (\$100.00) per month.
3. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

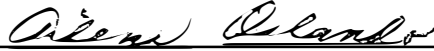
[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Second Extension as of the date first written above.

**UNIVERSITY:**  
**UNIVERSITY OF MASSACHSETTS**

By:  DocuSigned by:  
3C1AEC93FF6F431  
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

**LICENSEE:**  
**GREEN ROWS OF WALTHAM**

By:   
Name: Ailene Orlando  
Title: Treasurer

### FIRST EXTENSION OF LICENSE AGREEMENT

This First Extension of License Agreement ("First Extension") is made on April 30, 2020 by and between the University of Massachusetts Amherst ("University") and Green Rows of Waltham ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. Section 1 (Reference Data) of the Agreement shall be modified by deleting the Mailing Address of the University currently listed and replacing same with: *"Steven Goodwin, Whitmore Administration Building Room 347, 181 Presidents Drive, Amherst, MA 01003"*.
2. TERM: The term of the Agreement shall be extended through December 31, 2020.
3. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of One Thousand Two Hundred and 00/100 Dollars (\$1,200.00), payable in advance in monthly installments of One Hundred Dollars (\$100.00) per month.
4. Section 12 (Surrender of Premises) is hereby amended by deleting the following language in its entirety: *"However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1st) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises."*
5. Section 12 (Hazardous Materials) is hereby amended to replace *"Robert Schrader"* with *"the University's Environmental Health & Safety Office"*.
6. Section 15 (Insurance) is hereby amended to add the following to the end of the section: *"All certificates of insurance from Licensee shall list the University as an additional insured."*

7. Section 22 (Miscellaneous Provisions) is hereby amended by placing an "X" next to Exhibit A to indicate inclusion of same. Exhibit A showing land licensed is hereby attached and incorporated herein by reference.
8. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

[SIGNATURE PAGE TO FOLLOW]



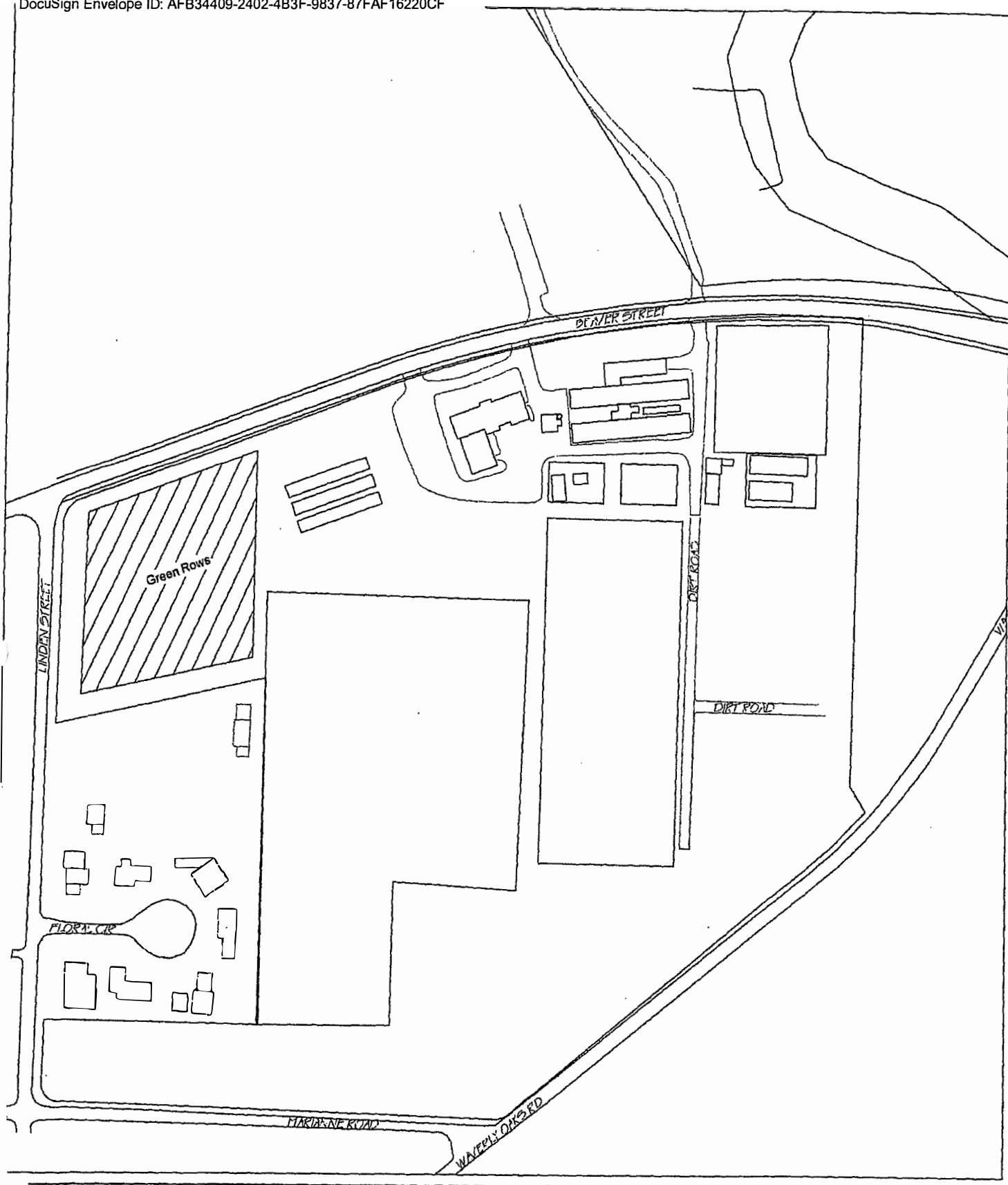
IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first written above.

**UNIVERSITY:**  
**UNIVERSITY OF MASSACHSETTS**

DocuSigned by:  
By: Andrew P. Mangels  
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

**LICENSEE:**  
**GREEN ROWS OF WALTHAM**

By: Ailene Orlando  
Name: Ailene Orlando  
Title: Treasurer



 Licensed Land

SCALE: 1"=200'  
0 50 100 200

**WALTHAM STATION  
GREEN ROWS  
EXHIBIT A - LICENSED LAND**

1/24/2020

UMass Campus Planning



## **Agreement and Conditions for Use of Office Facilities at the UMass Waltham Center**

This Agreement provides conditions for use of office space at the UMass Eastern Massachusetts Outreach Center. This agreement is between Green Rows of Waltham (hereinafter Licensee), a community organization, and the University of Massachusetts (hereinafter referred to as the University).

WHEREAS, the University is the owner of certain real property located at 240 Beaver Street in Waltham and further described in Section 2 of this Agreement; and

WHEREAS, the University is responsible for the care, control and maintenance of said real property; and

WHEREAS, Licensee desires to enter upon said real property for the purposes described in this Agreement;

NOW, THEREFORE, the University hereby grants such entry and use subject to the following terms and conditions:

1. REFERENCE DATA:

Date of Agreement: July 31, 2018

Mailing Address of University:

Evan Pacosa  
318D Stockbridge Hall  
University of Massachusetts  
Amherst, MA 01003

Mailing Address of Licensee:

Ailene Orlando  
c/o Green Rows of Waltham  
30 Clark Lane  
Waltham, MA 02451

Premises: 2 acres of farm land.

Permitted Use: Use the land as a community garden for local residents, especially those who have no access to a garden.

Consideration to be Paid by Licensee: \$1,800.00 per year.

2. LOCATION OF THE PREMISES

Entry and use are limited to the premises located at Northwest area of field, south side of Beaver Street.

3. PURPOSE AND USE

The rights of Licensee under this agreement shall be exercised solely for the following purposes: Use of land for a community garden.

Specific rules governing access to and use of these facilities are attached as **Exhibit B** and are binding upon both parties.

4. CONDITION OF PREMISES

Licensee acknowledges and agrees that it accepts the Premises in "as is" condition, that Licensors are under no obligation to make any repairs, renovations, or alterations to the Premises, and that the University has made no representations or warranties regarding the fitness of the Premises for Licensee's intended purpose or use.

5. TERM

Term of Agreement: July 1, 2018 to December 31, 2019 unless otherwise terminated earlier in accordance with the terms of this Agreement.

The term of this Agreement may be extended on the following terms, subject to the prior written approval of the University: This Agreement will be reviewed annually on the anniversary date or date mutually agreeable to both parties.

This Agreement is revocable at any time upon thirty (30) days' written notice from either party to the other.

6. HOURS OF OPERATION

During the term of this Agreement, Licensee shall be permitted to operate and use the Premises for the purposes set forth in Section 3 and described in **Exhibit B**.

7. FEE

In consideration of the rights granted to Licensee under this agreement, Licensee shall pay the following Fee:

\$1,800.00

8. PERMITS

This agreement and all obligations hereunder are specifically dependent upon the

issuance to the Licensee of all permits and licenses required to operate and use the Premises for the purposes described in this Agreement from those governmental agencies having jurisdiction. It shall be the responsibility of Licensee to obtain any such permits or licenses, at Licensee's sole cost and expense. In the event Licensee is refused any such permit or license, this agreement shall be null and void with no further obligation by either party to perform. If any such permit or license is revoked or canceled during the term of this Agreement, it shall be cause for terminating this Agreement immediately as set forth in Section 18(c) hereof.

9. ALTERATION OF THE PREMISES

Licensee shall make no alterations or improvements upon the Premises except as may be specifically permitted in a separate Schedule attached to this License as **Exhibit C**. If no such Schedule is attached, Licensee shall not make any alterations or improvements upon the Premises after this Agreement has commenced unless Licensee has obtained the University's prior written approval, which may be withheld for any reason or for no reason in the University's sole discretion. Any alterations or improvements made by Licensee shall be made in accordance with the terms and conditions established by the University, which may include prior approval of plans, insurance coverage, and a requirement that Licensee remove any or all of its alterations or improvements upon the expiration or earlier termination of this Agreement. All such alterations or improvements remaining upon the Premises after the expiration of this License shall be subject to the provisions of Section 12 hereof. In any event, this Agreement does not for any purpose constitute the granting of an interest in real property and Licensee shall not have any right to make any permanent improvements to, or to install any permanent fixtures on, the Premises.

10. LICENSEE'S EQUIPMENT

Licensee may bring such vehicles and other equipment upon the premises as should ordinarily be used to operate and use the Premises for the purposes permitted by this Agreement, subject, however, to the following limitations outlined in **Exhibit B**.

11. UTILITIES

The University shall provide janitorial services for common areas of the buildings and general maintenance of the buildings and grounds. Heat, electric, water and sewer utilities are provided for the facilities as needed.

The University makes no representation as to the adequacy of utility systems for purposes of Licensee and shall not be responsible for any interruption in utility service.

12. CONDUCT OF LICENSEE

Non-interference with University Operations

Licensee shall at all times conduct itself so as not to interfere in any way with the operation of the University facility. Licensee agrees to observe and obey all directives given by

duly designated personnel of the University.

#### Compliance with Laws

Licensee shall at all times operate within the premises in accordance with all applicable laws, statutes, ordinances, regulations, permits, licenses, and requirements of its insurance policies.

#### Repair of Damage

Licensee shall neither cause nor suffer any waste of the premises and shall maintain the premises in good order at all times. The Licensee's responsibilities shall include, but not be limited to, the repair of any and all damage or breakage resulting from acts of vandalism or the intentional or negligent acts of the Licensee or others, but excluding damage or breakage caused by employees, agents or invitees of the University. All repairs made by Licensee shall be performed in a manner satisfactory to the University.

#### Sanitation

Licensee shall maintain the Premises in a sanitary condition and shall follow all directions of the University with regard to the collection and disposal of refuse as provided in **Exhibit B**.

#### Security

Licensee shall be responsible for providing, at its sole cost and expense, such security protection or services as may be reasonably necessary to protect the premises and Licensee's invitees from injury or damage.

#### Cost of Operations

Except as otherwise expressly set forth in this Agreement, Licensee shall be responsible for any and all costs and expenses associated with the exercise of its rights under this Agreement and its operations upon the Premises.

#### Operations Limited to Permitted Uses

Licensee shall not conduct, nor permit any of its employees, agents or invitees to conduct, any operations or business upon the Premises except for that permitted by Section 3 of this Agreement.

#### Hazardous Materials

Without limiting any of Licensee's obligations under this or any other Section of this Agreement, Licensee agrees that it shall not cause any hazardous materials to be used, generated, stored or disposed of on, under or about, or transported to or from the premises. For the purposes of this Agreement, "hazardous materials" shall include, but not be limited to substances defined as "hazardous substances", "toxic substances", "hazardous wastes", "hazardous materials", or "oil" in any federal or state statute concerning hazardous materials now or hereafter enacted, including all regulations adopted or publications promulgated thereunder.

Licensee's involved in research and plant propagation may use licensed pesticides, subject to all regulations. Plans for use and storage must be approved annually by Robert

Schrader.

Alcoholic Beverages

Unless specifically permitted by the terms of this Agreement, Licensee shall not serve alcoholic beverages upon the Premises, nor allow any of its employees, agents, contractors or invitees to bring or consume alcoholic beverages upon the Premises.

Surrender of Premises

Upon the expiration or earlier termination of this Agreement, Licensee shall immediately vacate and surrender the Premises to the University. However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises. Licensee shall also remove all of its property from the Premises and restore the Premises to the condition the Premises were in at the commencement of this Agreement, reasonable wear and tear excepted, and subject further to any obligation Licensee may have hereunder to make repairs or improvements to the Premises. Upon agreement of the parties, Licensee may abandon all or part of its property in place. In the event any of Licensee's personal property remains on the Premises after the expiration or earlier termination of this Agreement without a written agreement between the parties, said property shall be deemed abandoned and may be retained by University without any compensation to Licensee, or may be removed and either stored or disposed of by the University at the sole cost and expense of Licensee.

13. INDEMNIFICATION

Not Applicable

14. RISK OF LOSS

Licensee agrees that it shall use and occupy the Premises at its own risk, and the University shall not be liable to Licensee for any loss or damage to vehicles, equipment, fixtures, or other personal property of the Licensee that are brought upon the Premises. Without limiting the foregoing, the University shall have no liability to Licensee for any injury, loss or damage caused by any act of Licensee's invitees or members of the general public.

15. INSURANCE

The Licensee shall keep in force, at its sole cost and expense, during the full term of this License, and during such other times as Licensee occupies the Premises or any part thereof, the following insurance policies:

- A. Comprehensive public liability insurance in an amount as required by Massachusetts law.
- B. Vehicle Liability Insurance covering each vehicle of Licensee entering the Premises in an amount as required by Massachusetts law.

C. Workers Compensation Insurance covering Licensee's employees upon the Premises in such amounts as are required by law.

D. Such other types of insurance and in such amounts as the University may, from time to time, require in its reasonable judgment.

One or more certificates of insurance showing insurance coverage as required by this Section 15 are attached to this license as **Exhibit D**.

The insurance coverage required by this Section shall be by standard policies, obtained from financially sound and responsible insurance companies authorized to do business in Massachusetts. In the event Licensee fails to obtain any of the insurance coverage required by this section, or if any of the required insurance policies are canceled, it shall be grounds for immediate termination of this Agreement as provided in Section 18(c) of this agreement.

16. ASSIGNMENT

The Licensee shall not sell, assign, sublet, mortgage or transfer any interest in this Agreement or any part of the Premises without obtaining, in each instance, the prior written consent of the University, which consent may be withheld for any reason or for no reason, or granted upon such conditions as the University shall determine, all in its sole discretion.

17. RIGHTS OF UNIVERSITY AND AGENCY TO ENTER

The University reserves the right and the Licensee shall permit the University or its employees or agents to enter upon the Premises at any time to make repairs, perform maintenance, inspect the Premises, show the Premises to others, monitor compliance with this Agreement, or for any other reason.

18. TERMINATION

This Agreement shall expire on the date specified in Section 5, unless extended in compliance with the terms of this Agreement and all other requirements of law, or unless terminated earlier under the following conditions:

A. Without Cause. Either Licensee or the University may terminate this Agreement by giving written notice to the other party at least thirty (30) calendar days prior to the effective date of termination stated in the notice.

B. For Cause. If, in the opinion of University, Licensee fails to fulfill its obligations, The University may terminate this Agreement by giving written notice to the Licensee at least five (5) calendar days before the effective date of termination stated in the notice. The notice shall specify in reasonable detail the nature of Licensee's breach. The notice may also state a period during which the breach may be cured by Licensee, provided that such period shall expire on or before the termination date stated in the notice. In the event the Licensee is given an opportunity to cure its breach (which shall be within the sole discretion of the University) and Licensee fails



to complete such cure to the satisfaction of the University within the cure period, this Agreement shall come to an end on the termination date stated in the notice.

C. Emergency. In the event the University determines that it is necessary to terminate this Agreement or suspend Licensee's rights hereunder immediately in order to prevent injury or damage to persons or property, including the interest of the University in the Premises, the University may terminate this Agreement or suspend Licensee's rights hereunder by providing written notice to Licensee stating the grounds for said termination or suspension. Said notice may be given in the form of a telegram, mailgram, hand-carried letter, or other reasonable written means, and this License shall be terminated or suspended, as the case may be, upon delivery of said notice to Licensee.

In the event this Agreement is terminated in accordance with any of the provisions of this Section 18, this Agreement shall come to an end as fully and completely as if the term had expired on the date set forth in Section 5, and Licensee shall vacate and surrender the Premises as provided in Section 12.

In the event this Agreement is terminated by the University in accordance with any of the provisions of this Section 18, Licensee shall not be relieved of liability to the University for arrears in the License fees or for any other injury or damage sustained by the University as a result of a breach of Licensee of any of the terms or conditions of this Agreement, whether occurring before or after such termination. Licensee expressly waives any right to damages related to such termination, including incidental or consequential damages. If this Agreement is terminated for any reason that is not the fault of Licensee, then the fee which the Licensee has covenanted to pay, if any, shall be commensurately reduced by the University on a pro rata per diem basis, and Licensee shall receive a refund of any portion of the Agreement Fee that has been prepaid for a period during which the Licensee was denied use and occupancy of the Premises.

19. NO ESTATE CREATED

This Agreement shall not be construed as creating or vesting in Licensee any estate in the Premises, but only the limited right of possession as herein described, and Licensee shall have no right to require specific performance of the obligation of the University hereunder.

20. NON-DISCRIMINATION

Licensee shall not discriminate against any qualified employee, applicant for employment, subcontractor, or person or firm seeking to provide goods or services to Licensee, nor shall Licensee deny any person access to the Premises or to any activities or programs carried out pursuant to this Agreement because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation. The Licensee shall comply with all applicable federal and state statutes, rules, and regulations prohibiting discrimination in employment.

21. NOTICE

All notices or other communications required or permitted to be given under this Agreement shall, unless otherwise expressly permitted hereunder, be in writing signed by a duly authorized representative of the party giving the notice and shall be given by hand delivery (including, without limitation, courier, Federal Express, or other overnight delivery service) or mailed by United States certified mail, postage prepaid, return receipt requested. Such notices shall be sent or addressed to the University and Licensee at the addresses set forth in Section 1.

## 22. MISCELLANEOUS PROVISIONS

This Agreement may not be modified except in writing, duly executed by both parties.

This Agreement contains the entire agreement of the parties and there are no other agreements or understandings between the parties regarding the subject matter of this Agreement.

The University, its employees, officers or agents, are not authorized to bind or involve the Licensee or the Commonwealth of Massachusetts in any contract or to incur any liability for or on the part of the Licensee or the Commonwealth of Massachusetts.

If any portion of this Agreement is declared to be illegal, unenforceable or void, then all parties to this Agreement shall be relieved of all obligations under that portion; provided, however, that the remainder of this agreement shall be enforced to the fullest extent permitted by law.

No consent or waiver, whether express or implied, by the University to or of any breach of the terms of this Agreement by Licensee shall be construed as a consent or waiver to or of any other breach. No waiver of any breach or default or other indulgence shall be effective unless expressed in writing by the University.

The captions in this Agreement are inserted for convenience of reference only and in no way define, describe or limit the scope or intent of this Agreement or any of the provisions hereof.

No official, employee or consultant of the Commonwealth of Massachusetts (including any Trustee of the University of Massachusetts) shall be personally liable to Licensee or to any person claiming under or through Licensee for or on account of any alleged breach of this Agreement, or for any act, failure to act or other matter arising out of the execution of this Agreement or the performance of Licensee's obligations hereunder.

This Agreement shall be governed by, and construed in accordance with the laws of the Commonwealth of Massachusetts, and any and all legal actions brought in connection with this Agreement shall be brought in courts within the Commonwealth of Massachusetts.

No provision of this Agreement shall be deemed to have been waived by either party unless such waiver is in writing and is signed by the party to be charged.

This Agreement is to take effect as a sealed instrument.


The following exhibits and attachments are made a part of this Agreement for all purposes:

- ☐ Exhibit A - Plan or Diagram of Premises to be Utilized by Licensee
- ☒ Exhibit B - Specific Rules Governing Access and Use of Facility
- ☐ Exhibit C - Schedule of Permitted Alterations and Improvements
- ☒ Exhibit D - Insurance Certificate(s)

**AGREED AND ACCEPTED**

**UNIVERSITY OF  
MASSACHUSETTS:**

**LICENSEE:**

  
\_\_\_\_\_  
Signature

Joe Shoenfeld, Associate Director  
Center for Agriculture, Food and the  
Environment  
University of Massachusetts

10/15/18  
Date

  
\_\_\_\_\_  
Authorized Signature

Ailene Orlando  
Green Rows of Waltham - *Treasurer*

10/25/18  
Date



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
06/25/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

## PRODUCER

BIKOFKY INSURANCE AGENCY INC  
793 WASHINGTON ST  
NEWTONVILLE, MA 02460  
(888) 661-3938

## CONTACT

NAME:  
PHONE (A/C, No, Ext): (888) 661-3938 FAX (A/C, No): (877) 872-7604  
E-MAIL  
ADDRESS: service.center@travelers.com

## INSURER(S) AFFORDING COVERAGE

## NAIC #

INSURER A: THE TRAVELERS INDEMNITY COMPANY OF CONNECTICUT

## INSURED

GROW-GREEN ROWS OF WALTHAM  
C/O AILENE ORLANDO  
30 CLARK LANE  
WALTHAM, MA 02451

INSURER B:

INSURER C:

INSURER D:

INSURER E:

INSURER F:

## COVERAGES

CERTIFICATE NUMBER: 123639519402671

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:	X		660-779X2799-19	08/02/2019	08/02/2020	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
	AUTOMOBILE LIABILITY  <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	UMBRELLA LIAB EXCESS LIAB  DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N/A				PER STATUTE OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

AS RESPECTS TO GENERAL LIABILITY, CERTIFICATE HOLDER IS ADDITIONAL INSURED - MANAGERS OR LESSORS OF PREMISES, CG 20 11, FOR THE FOLLOWING LOCATION: BEAVER STREET, WALTHAM, MA 02451

## CERTIFICATE HOLDER

UMASS EXTENSION, UNIVERSITY OF  
MASSACHUSETTS  
101 UNIVERSITY DRIVE  
AMHERST, MA 01003

## CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

*Misty Kuckelman*

October 25, 2018

Evan Pacosa  
318D Stockbridge Hall  
University of Massachusetts  
Amherst, MA 01003


Dear Evan,

Enclosed please find the signed page from the 18 month license agreement, July 1, 2018 to December 31, 2019 for GROW, Green Rows of Waltham, for land for our community garden.

I have also enclosed a copy of our insurance certificate of liability and our check in the amount of \$600 representing the first installment of the amount due.

Please feel free to be in touch with me if there is anything else you need. (781-894-8147)  
Thank you for your help, Evan.

Sincerely,

  
Ailene Orlando  
GROW Treasurer

## FIRST EXTENSION OF LICENSE AGREEMENT

This First Extension of License Agreement ("First Extension") is made on January 30, 2020 by and between the University of Massachusetts Amherst ("University") and Waltham Land Trust ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018 for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. Section 1 (Reference Data) of the Agreement shall be modified by deleting the Mailing Address of the University currently listed and replacing same with: *"Steven Goodwin, Whitmore Administration Building Room 347, 181 Presidents Drive, Amherst, MA 01003"*.
2. TERM: The term of the Agreement shall be extended through December 31, 2020.
3. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of Five Thousand and 00/100 Dollars (\$5,000.00), payable in advance in monthly installments of Four Hundred Sixteen Dollars and Sixty-seven cents (\$416.67) per month.
4. Section 12 (Surrender of Premises) is hereby amended by deleting the following language in its entirety: *"However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises."*
5. Section 12 (Hazardous Materials) is hereby amended to replace *"Robert Schrader"* with *"the University's Environmental Health & Safety Office"*.
6. Section 15 (Insurance) is hereby amended to add the following to the end of the section: *"All certificates of insurance from Licensee shall list the University as an additional insured."*
7. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved, and shall remain in full force and effect in accordance with its terms.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first written above.

**UNIVERSITY:**

UNIVERSITY OF MASSACHSETTS

DocuSigned by:  
By: Andrew P. Mangels  
3CTAEC93FF6F431...  
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

**LICENSEE:**

WALTHAM LAND TRUST

By: Sonja Wadman  
Name: Sonja Wadman  
Title: Executive Director

## SECOND EXTENSION OF LICENSE AGREEMENT

This Second Extension of License Agreement ("Second Extension") is made on December 15, 2020 by and between the University of Massachusetts Amherst ("University") and Waltham Land Trust ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018 for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. TERM: The term of the Agreement shall be extended on a month-to-month basis, terminable by Licensor or Licensee upon thirty (30) days' prior written notice to the other party.
2. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of Four Hundred Sixteen Dollars and Sixty-seven cents (\$416.67) per month.
3. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved, and shall remain in full force and effect in accordance with its terms.

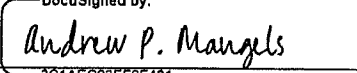
[SIGNATURE PAGE TO FOLLOW]



IN WITNESS WHEREOF, the parties hereto have executed this Second Extension as of the date first written above.


**UNIVERSITY:**

UNIVERSITY OF MASSACHSETTS

By:  DocuSigned by:  
3C1AEC93FF6F431...  
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

**LICENSEE:**

WALTHAM LAND TRUST

By:   
Name: Marc Rudnick  
Title: Treasurer

JULY 1, 2018 - DECEMBER 31, 2019

18 MONTH LEASE CONTRACT

## **Agreement and Conditions for Use of Office Facilities at the UMass Waltham Center**

This Agreement provides conditions for use of office space at the UMass Eastern Massachusetts Outreach Center. This agreement is between Waltham Land Trust (hereinafter Licensee), a non profit corporation, and the University of Massachusetts (hereinafter referred to as the University).

WHEREAS, the University is the owner of certain real property located at 240 Beaver Street in Waltham and further described in Section 2 of this Agreement; and

WHEREAS, the University is responsible for the care, control and maintenance of said real property; and

WHEREAS, Licensee desires to enter upon said real property for the purposes described in this Agreement;

NOW, THEREFORE, the University hereby grants such entry and use subject to the following terms and conditions:

1. REFERENCE DATA:

Date of Agreement: July 31, 2018

Mailing Address of University:

Evan Pacosa  
318D Stockbridge Hall  
University of Massachusetts  
Amherst, MA 01003

Mailing Address of Licensee:

Marc Rudnick, Treasurer  
Waltham Land Trust  
P.O. Box 541120  
Waltham, MA 02454

Premises: Use of the Office # 104 & 105. These rooms are located in the main building at 240 Beaver Street, Waltham, MA.

Permitted Use: Waltham Land Trust, Inc. is a non-profit corporation dedicated to preserving our community's natural resources for the future through education, open space acquisition and protection. The office will be used for administrative functions related to the mission of the organization.

2. LOCATION OF THE PREMISES

Entry and use are limited to the premises located at Rooms 104 & 105.

3. PURPOSE AND USE

The rights of Licensee under this agreement shall be exercised solely for the following purposes: The office will be used for administrative functions related to the mission of the organization.

Specific rules governing access to and use of these facilities are attached as **Exhibit B** and are binding upon both parties.

4. CONDITION OF PREMISES

Licensee acknowledges and agrees that it accepts the Premises in "as is" condition, that Licenser is under no obligation to make any repairs, renovations, or alterations to the Premises, and that the University has made no representations or warranties regarding the fitness of the Premises for Licensee's intended purpose or use.

5. TERM

Term of Agreement: July 1, 2018 to December 31, 2019 unless otherwise terminated earlier in accordance with the terms of this Agreement.

The term of this Agreement may be extended on the following terms, subject to the prior written approval of the University: This Agreement will be reviewed annually on the anniversary date or date mutually agreeable to both parties.

This Agreement is revocable at any time upon thirty (30) days' written notice from either party to the other.

6. HOURS OF OPERATION

During the term of this Agreement, Licensee shall be permitted to operate and use the Premises for the purposes set forth in Section 3 and described in **Exhibit B**.

7. FEE

In consideration of the rights granted to Licensee under this agreement, Licensee shall pay the following Fee:

\$7,500.00

8. PERMITS

This agreement and all obligations hereunder are specifically dependent upon the

issuance to the Licensee of all permits and licenses required to operate and use the Premises for the purposes described in this Agreement from those governmental agencies having jurisdiction. It shall be the responsibility of Licensee to obtain any such permits or licenses, at Licensee's sole cost and expense. In the event Licensee is refused any such permit or license, this agreement shall be null and void with no further obligation by either party to perform. If any such permit or license is revoked or canceled during the term of this Agreement, it shall be cause for terminating this Agreement immediately as set forth in Section 18(c) hereof.

9. ALTERATION OF THE PREMISES

Licensee shall make no alterations or improvements upon the Premises except as may be specifically permitted in a separate Schedule attached to this License as **Exhibit C**. If no such Schedule is attached, Licensee shall not make any alterations or improvements upon the Premises after this Agreement has commenced unless Licensee has obtained the University's prior written approval, which may be withheld for any reason or for no reason in the University's sole discretion. Any alterations or improvements made by Licensee shall be made in accordance with the terms and conditions established by the University, which may include prior approval of plans, insurance coverage, and a requirement that Licensee remove any or all of its alterations or improvements upon the expiration or earlier termination of this Agreement. All such alterations or improvements remaining upon the Premises after the expiration of this License shall be subject to the provisions of Section 12 hereof. In any event, this Agreement does not for any purpose constitute the granting of an interest in real property and Licensee shall not have any right to make any permanent improvements to, or to install any permanent fixtures on, the Premises.

10. LICENSEE'S EQUIPMENT

Licensee may bring such vehicles and other equipment upon the premises as should ordinarily be used to operate and use the Premises for the purposes permitted by this Agreement, subject, however, to the following limitations outlined in **Exhibit B**.

11. UTILITIES

The University shall provide janitorial services for common areas of the buildings and general maintenance of the buildings and grounds. Heat, electric, water and sewer utilities are provided for the facilities as needed.

The University makes no representation as to the adequacy of utility systems for purposes of Licensee and shall not be responsible for any interruption in utility service.

12. CONDUCT OF LICENSEE

Non-interference with University Operations

Licensee shall at all times conduct itself so as not to interfere in any way with the operation of the University facility. Licensee agrees to observe and obey all directives given by

duly designated personnel of the University.

#### Compliance with Laws

Licensee shall at all times operate within the premises in accordance with all applicable laws, statutes, ordinances, regulations, permits, licenses, and requirements of its insurance policies.

#### Repair of Damage

Licensee shall neither cause nor suffer any waste of the premises and shall maintain the premises in good order at all times. The Licensee's responsibilities shall include, but not be limited to, the repair of any and all damage or breakage resulting from acts of vandalism or the intentional or negligent acts of the Licensee or others, but excluding damage or breakage caused by employees, agents or invitees of the University. All repairs made by Licensee shall be performed in a manner satisfactory to the University.

#### Sanitation

Licensee shall maintain the Premises in a sanitary condition and shall follow all directions of the University with regard to the collection and disposal of refuse as provided in **Exhibit B**.

#### Security

Licensee shall be responsible for providing, at its sole cost and expense, such security protection or services as may be reasonably necessary to protect the premises and Licensee's invitees from injury or damage.

#### Cost of Operations

Except as otherwise expressly set forth in this Agreement, Licensee shall be responsible for any and all costs and expenses associated with the exercise of its rights under this Agreement and its operations upon the Premises.

#### Operations Limited to Permitted Uses

Licensee shall not conduct, nor permit any of its employees, agents or invitees to conduct, any operations or business upon the Premises except for that permitted by Section 3 of this Agreement.

#### Hazardous Materials

Without limiting any of Licensee's obligations under this or any other Section of this Agreement, Licensee agrees that it shall not cause any hazardous materials to be used, generated, stored or disposed of on, under or about, or transported to or from the premises. For the purposes of this Agreement, "hazardous materials" shall include, but not be limited to substances defined as "hazardous substances", "toxic substances", "hazardous wastes", "hazardous materials", or "oil" in any federal or state statute concerning hazardous materials now or hereafter enacted, including all regulations adopted or publications promulgated thereunder.

Licensee's involved in research and plant propagation may use licensed pesticides, subject to all regulations. Plans for use and storage must be approved annually by Robert

Schrader.

#### Alcoholic Beverages

Unless specifically permitted by the terms of this Agreement, Licensee shall not serve alcoholic beverages upon the Premises, nor allow any of its employees, agents, contractors or invitees to bring or consume alcoholic beverages upon the Premises.

#### Surrender of Premises

Upon the expiration or earlier termination of this Agreement, Licensee shall immediately vacate and surrender the Premises to the University. However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises. Licensee shall also remove all of its property from the Premises and restore the Premises to the condition the Premises were in at the commencement of this Agreement, reasonable wear and tear excepted, and subject further to any obligation Licensee may have hereunder to make repairs or improvements to the Premises. Upon agreement of the parties, Licensee may abandon all or part of its property in place. In the event any of Licensee's personal property remains on the Premises after the expiration or earlier termination of this Agreement without a written agreement between the parties, said property shall be deemed abandoned and may be retained by University without any compensation to Licensee, or may be removed and either stored or disposed of by the University at the sole cost and expense of Licensee.

#### 13. INDEMNIFICATION

Not Applicable

#### 14. RISK OF LOSS

Licensee agrees that it shall use and occupy the Premises at its own risk, and the University shall not be liable to Licensee for any loss or damage to vehicles, equipment, fixtures, or other personal property of the Licensee that are brought upon the Premises. Without limiting the foregoing, the University shall have no liability to Licensee for any injury, loss or damage caused by any act of Licensee's invitees or members of the general public.

#### 15. INSURANCE

The Licensee shall keep in force, at its sole cost and expense, during the full term of this License, and during such other times as Licensee occupies the Premises or any part thereof, the following insurance policies:

- A. Comprehensive public liability insurance in an amount as required by Massachusetts law.
- B. Vehicle Liability Insurance covering each vehicle of Licensee entering the Premises in an amount as required by Massachusetts law.

C. Workers Compensation Insurance covering Licensee's employees upon the Premises in such amounts as are required by law.

D. Such other types of insurance and in such amounts as the University may, from time to time, require in its reasonable judgment.

One or more certificates of insurance showing insurance coverage as required by this Section 15 are attached to this license as **Exhibit D**.

The insurance coverage required by this Section shall be by standard policies, obtained from financially sound and responsible insurance companies authorized to do business in Massachusetts. In the event Licensee fails to obtain any of the insurance coverage required by this section, or if any of the required insurance policies are canceled, it shall be grounds for immediate termination of this Agreement as provided in Section 18(c) of this agreement.

16. ASSIGNMENT

The Licensee shall not sell, assign, sublet, mortgage or transfer any interest in this Agreement or any part of the Premises without obtaining, in each instance, the prior written consent of the University, which consent may be withheld for any reason or for no reason, or granted upon such conditions as the University shall determine, all in its sole discretion.

17. RIGHTS OF UNIVERSITY AND AGENCY TO ENTER

The University reserves the right and the Licensee shall permit the University or its employees or agents to enter upon the Premises at any time to make repairs, perform maintenance, inspect the Premises, show the Premises to others, monitor compliance with this Agreement, or for any other reason.

18. TERMINATION

This Agreement shall expire on the date specified in Section 5, unless extended in compliance with the terms of this Agreement and all other requirements of law, or unless terminated earlier under the following conditions:

A. Without Cause. Either Licensee or the University may terminate this Agreement by giving written notice to the other party at least thirty (30) calendar days prior to the effective date of termination stated in the notice.

B. For Cause. If, in the opinion of University, Licensee fails to fulfill its obligations, The University may terminate this Agreement by giving written notice to the Licensee at least five (5) calendar days before the effective date of termination stated in the notice. The notice shall specify in reasonable detail the nature of Licensee's breach. The notice may also state a period during which the breach may be cured by Licensee, provided that such period shall expire on or before the termination date stated in the notice. In the event the Licensee is given an opportunity to cure its breach (which shall be within the sole discretion of the University) and Licensee fails

to complete such cure to the satisfaction of the University within the cure period, this Agreement shall come to an end on the termination date stated in the notice.

C. Emergency. In the event the University determines that it is necessary to terminate this Agreement or suspend Licensee's rights hereunder immediately in order to prevent injury or damage to persons or property, including the interest of the University in the Premises, the University may terminate this Agreement or suspend Licensee's rights hereunder by providing written notice to Licensee stating the grounds for said termination or suspension. Said notice may be given in the form of a telegram, mailgram, hand-carried letter, or other reasonable written means, and this License shall be terminated or suspended, as the case may be, upon delivery of said notice to Licensee.

In the event this Agreement is terminated in accordance with any of the provisions of this Section 18, this Agreement shall come to an end as fully and completely as if the term had expired on the date set forth in Section 5, and Licensee shall vacate and surrender the Premises as provided in Section 12.

In the event this Agreement is terminated by the University in accordance with any of the provisions of this Section 18, Licensee shall not be relieved of liability to the University for arrears in the License fees or for any other injury or damage sustained by the University as a result of a breach of Licensee of any of the terms or conditions of this Agreement, whether occurring before or after such termination. Licensee expressly waives any right to damages related to such termination, including incidental or consequential damages. If this Agreement is terminated for any reason that is not the fault of Licensee, then the fee which the Licensee has covenanted to pay, if any, shall be commensurately reduced by the University on a pro rata per diem basis, and Licensee shall receive a refund of any portion of the Agreement Fee that has been prepaid for a period during which the Licensee was denied use and occupancy of the Premises.

19. NO ESTATE CREATED

This Agreement shall not be construed as creating or vesting in Licensee any estate in the Premises, but only the limited right of possession as herein described, and Licensee shall have no right to require specific performance of the obligation of the University hereunder.

20. NON-DISCRIMINATION

Licensee shall not discriminate against any qualified employee, applicant for employment, subcontractor, or person or firm seeking to provide goods or services to Licensee, nor shall Licensee deny any person access to the Premises or to any activities or programs carried out pursuant to this Agreement because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation. The Licensee shall comply with all applicable federal and state statutes, rules, and regulations prohibiting discrimination in employment.

21. NOTICE



All notices or other communications required or permitted to be given under this Agreement shall, unless otherwise expressly permitted hereunder, be in writing signed by a duly authorized representative of the party giving the notice and shall be given by hand delivery (including, without limitation, courier, Federal Express, or other overnight delivery service) or mailed by United States certified mail, postage prepaid, return receipt requested. Such notices shall be sent or addressed to the University and Licensee at the addresses set forth in Section 1.

## 22. MISCELLANEOUS PROVISIONS

This Agreement may not be modified except in writing, duly executed by both parties.

This Agreement contains the entire agreement of the parties and there are no other agreements or understandings between the parties regarding the subject matter of this Agreement.

The University, its employees, officers or agents, are not authorized to bind or involve the Licensee or the Commonwealth of Massachusetts in any contract or to incur any liability for or on the part of the Licensee or the Commonwealth of Massachusetts.

If any portion of this Agreement is declared to be illegal, unenforceable or void, then all parties to this Agreement shall be relieved of all obligations under that portion; provided, however, that the remainder of this agreement shall be enforced to the fullest extent permitted by law.

No consent or waiver, whether express or implied, by the University to or of any breach of the terms of this Agreement by Licensee shall be construed as a consent or waiver to or of any other breach. No waiver of any breach or default or other indulgence shall be effective unless expressed in writing by the University.

The captions in this Agreement are inserted for convenience of reference only and in no way define, describe or limit the scope or intent of this Agreement or any of the provisions hereof.

No official, employee or consultant of the Commonwealth of Massachusetts (including any Trustee of the University of Massachusetts) shall be personally liable to Licensee or to any person claiming under or through Licensee for or on account of any alleged breach of this Agreement, or for any act, failure to act or other matter arising out of the execution of this Agreement or the performance of Licensee's obligations hereunder.

This Agreement shall be governed by, and construed in accordance with the laws of the Commonwealth of Massachusetts, and any and all legal actions brought in connection with this Agreement shall be brought in courts within the Commonwealth of Massachusetts.

No provision of this Agreement shall be deemed to have been waived by either party unless such waiver is in writing and is signed by the party to be charged.

This Agreement is to take effect as a sealed instrument.

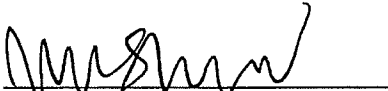
The following exhibits and attachments are made a part of this Agreement for all purposes:

- ☐ Exhibit A - Plan or Diagram of Premises to be Utilized by Licensee
- ☒ Exhibit B - Specific Rules Governing Access and Use of Facility
- ☐ Exhibit C - Schedule of Permitted Alterations and Improvements
- ☒ Exhibit D - Insurance Certificate(s)

**AGREED AND ACCEPTED**

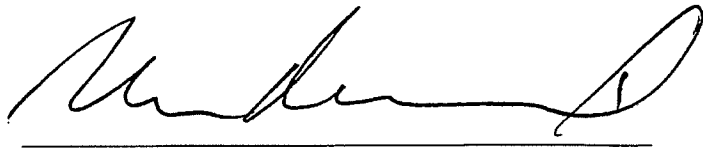
**UNIVERSITY OF  
MASSACHUSETTS:**

**LICENSEE:**

  
Signature

Joe Shoenfeld, Associate Director  
Center for Agriculture, Food and the  
Environment  
University of Massachusetts

8/27/18  
Date

  
Authorized Signature

Marc Rudnick, Treasurer  
Waltham Land Trust

9/7/18  
Date

## **Exhibit B    Use of Grounds and Land at UMass Waltham, 240 Beaver Street, Waltham, Mass.**

### **Specific Rules Governing Access To and Use of Facility**

The following rules apply to use of the facility. All communications related to compliance with use rules and requests for permitted variances should be directed to Facility Manager (Tony Mazzeo) at the facility.

#### **General Rules:**

**Civility and Adherence to Rules:** Licensees are responsible for actions of their staff, guests and general public invited onto premises. Licensee is responsible for ensuring compliance with all facility rules.

**Hours of Operation:** Facility is open to licensees and their guests. The building is accessible from 6 AM-11 PM. Outside grounds are accessible from 6 AM till dark.

**Parking:** Parking is generally available in lots surrounding the building. No parking is allowed on the grass without prior approval. No vehicles are to be left overnight without prior approval.

**Persons Authorized to Have Access to Facility:** Each licensee is to provide to the Facility Manager a list of persons who will have regular access to the facility. All persons having regular access to the building must be over the age of 18. For persons utilizing space within the buildings this list will specifically identify those who are to receive building keys.

**Special Events:** Special events, such as plant sales, shows, educational programs and community events, which will use additional areas of the facility are permitted, subject to the approval of the University. Use of the facility can be scheduled through the Facility Manager. Additional fees may be charged to cover related costs to the University, such as staff time, rubbish removal, etc.

### **Operational Rules for Organizations Using the Grounds and Land**

**Facility Access:** The grounds are open to licensees from 6 AM - dark. Cars are to be driven onto grass areas only to load and unload materials or for handicapped access. Parking areas for handicapped access will be identified in advance.

**Staff Services:** University staff are responsible for operation and maintenance of the facility. University staff do not provide plant production or administrative services. Each organization must provide their own labor and related services.

**Rubbish and Organic Materials Removal:** Licensee is responsible for removing rubbish and recyclable materials to dumpsters and/or receptacles for recycling. Plant waste and related organic materials are to be discarded in areas identified by the facility manager.

**Site Maintenance & Appearance:** Assigned area must appear neat, clean, and orderly throughout the year. Refuse cannot be left at the site. End of the season clean-up is required. Details for clean-up and closing of land operations will be provided.

**Water and Utilities:** Water is generally provided to each site. Water conservation must be practiced. Water leaks are to be reported to the Facility Manager. All groups using more than an acre of land and the community garden group (GROW) will provide their own water meter in order to monitor use. The University will limit water use as deemed necessary.

**Alterations and Changes in Use of the Land:** The land can only be used for the purpose stated in the application form and Agreement. Any changes in use or changes to the land or landscape must be requested in writing to the Facility Manager. This includes pruning any surrounding trees or shrubs and adding structures, fencing, trellises or related items.

**Signage:** Small descriptive signs are to be posted at the site, identifying the organization, use of the land (purpose) and contact person for further information.

**Contacts and Communications:** All issues related to building and facility use should be brought to the attention of the Facility Manager, Tony Mazzeo.

Joe Shoenfeld

Associate Director, UMass Center for Agriculture, Food and the Environment

July, 2018

## SECOND EXTENSION OF LICENSE AGREEMENT

This Second Extension of License Agreement ("Second Extension") is made on December 15, 2020 by and between the University of Massachusetts Amherst ("University") and Grow Native Massachusetts ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

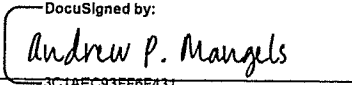
1. TERM: The term of the Agreement shall be extended on a month-to-month basis, terminable by Licensor or Licensee upon thirty (30) days' prior written notice to the other party.
2. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of Four Hundred Sixteen Dollars and Sixty-seven cents (\$416.67) per month.
3. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Second Extension as of the date first written above.

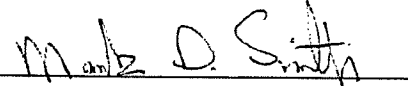
**UNIVERSITY:**

UNIVERSITY OF MASSACHSETTS

By:  DocuSigned by:  
3CTAEC93FF0F431...  
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

**LICENSEE:**

GROW NATIVE MASSACHUSETTS

By:   
Name: Mark D. Smith  
Title: President

## FIRST EXTENSION OF LICENSE AGREEMENT

This First Extension of License Agreement ("First Extension") is made on January 30, 2020 by and between the University of Massachusetts Amherst ("University") and Grow Native Massachusetts ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. Section 1 (Reference Data) of the Agreement shall be modified by deleting the Mailing Address of the University currently listed and replacing same with: *"Steven Goodwin, Whitmore Administration Building Room 347, 181 Presidents Drive, Amherst, MA 01003"*.
2. TERM: The term of the Agreement shall be extended through December 31, 2020.
3. PREMISES: Rooms 207 and 208 are added to the rooms available for use by the Licensee.
4. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of Five Thousand and 00/100 Dollars (\$5,000.00), payable in advance in monthly installments of Four Hundred Sixteen Dollars and Sixty-seven cents (\$416.67) per month.
5. Section 12 (Surrender of Premises) is hereby amended by deleting the following language in its entirety: *"However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises."*
6. Section 12 (Hazardous Materials) is hereby amended to replace *"Robert Schrader"* with *"the University's Environmental Health & Safety Office"*.
7. Section 15 (Insurance) is hereby amended to add the following to the end of the section: *"All certificates of insurance from Licensee shall list the University as an additional insured."*

8. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

[SIGNATURE PAGE TO FOLLOW]



IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first written above.

UNIVERSITY:  
UNIVERSITY OF MASSACHSETTS

By: Andrew P. Mangels  
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

LICENSEE:  
GROW NATIVE MASSACHUSETTS

By: Mark D. Smith  
Name: Mark D. Smith  
Title: President



# CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)  
08/01/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Aon Risk Services Northeast, Inc. Providence RI Office 100 Westminster Street, 10th Floor Providence RI 02903-2393 USA	<b>CONTACT</b> NAME: PHONE (AC. No. Ext.): (866) 283-7122 FAX (AC. No.): (800) 363-0105 E-MAIL ADDRESS:  <b>INSURER(S) AFFORDING COVERAGE</b>  <b>INSURER A:</b> United Educators Ins, a Reciprocal RRG <b>INSURER B:</b> <b>INSURER C:</b> <b>INSURER D:</b> <b>INSURER E:</b> <b>INSURER F:</b>	<b>NAIC #</b> 10020
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**INSURED**  
University of Massachusetts  
333 South Street, Suite 450  
Shrewsbury MA 01545 USA

**COVERAGES**

CERTIFICATE NUMBER: 570072548348

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVO	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:		U4075A SIR applies per policy terms & conditions	05/01/2018	05/01/2019	EACH OCCURRENCE \$750,000 DAMAGE TO RENTED PREMISES (Ea occurrence) Included MED EXP (Any one person) Excluded PERSONAL & ADV INJURY Included GENERAL AGGREGATE \$3,000,000 PRODUCTS - COMP/OP AGG Included SIR \$250,000
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> RENTED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY					COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
A	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> RETENTION \$1,000,000		U4075A	05/01/2018	05/01/2019	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/ MEMBER EXCLUDED? (Mandatory in NE) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/> N/A				PER STATUTE <input type="checkbox"/> OTHER <input type="checkbox"/> E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

**CERTIFICATE HOLDER****CANCELLATION**

Grow Native Massachusetts Attn: Claudia Thompson 240 Beaver Street Waltham MA 02452 USA	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE  <i>Aon Risk Services Northeast Inc.</i>
--	--

Holder Identifier :

Certificate No : 570072548348

JULY 1, 2018 - DECEMBER 31, 2019

18 MONTH LEASE CONTRACT

## Agreement and Conditions for Use of Office Facilities at the UMass Waltham Center

This Agreement provides conditions for use of office space at the UMass Eastern Massachusetts Outreach Center. This agreement is between Grow Native Massachusetts (hereinafter Licensee), a non profit corporation and the University of Massachusetts (hereinafter referred to as the University).

WHEREAS, the University is the owner of certain real property located at 240 Beaver Street in Waltham and further described in Section 2 of this Agreement; and

WHEREAS, the University is responsible for the care, control and maintenance of said real property; and

WHEREAS, Licensee desires to enter upon said real property for the purposes described in this Agreement;

NOW, THEREFORE, the University hereby grants such entry and use subject to the following terms and conditions:

1. REFERENCE DATA:

Date of Agreement: July 31, 2018

Mailing Address of University:

Evan Pacosa  
318D Stockbridge Hall  
University of Massachusetts  
Amherst, MA 01003

Mailing Address of Licensee:

Grow Native Massachusetts  
c/o Claudia Thompson  
240 Beaver Street  
Waltham, MA 02453

Premises: Use of one office. These rooms, number 203 & 204, are located on the 2<sup>nd</sup> floor of the main building and demonstration garden area (approximately 50FT x 100FT) located in the "Rose Garden" area at 240 Beaver Street, Waltham, MA.

Permitted Use: The office will be used for administrative functions related to the mission of the organization. The garden will be used to demonstrate sustainable plantings.

2. LOCATION OF THE PREMISES

Entry and use are limited to the premises located at room 203 & 204.

3. PURPOSE AND USE

The rights of Licensee under this agreement shall be exercised solely for the following purposes: The office will be used for administrative functions related to the mission of the organization.

Specific rules governing access to and use of these facilities are attached as **Exhibit B** and are binding upon both parties.

4. CONDITION OF PREMISES

Licensee acknowledges and agrees that it accepts the Premises in "as is" condition, that Licenser is under no obligation to make any repairs, renovations, or alterations to the Premises, and that the University has made no representations or warranties regarding the fitness of the Premises for Licensee's intended purpose or use.

5. TERM

Term of Agreement: July 1, 2018 to December 31, 2019 unless otherwise terminated earlier in accordance with the terms of this Agreement.

The term of this Agreement may be extended on the following terms, subject to the prior written approval of the University: This Agreement will be reviewed annually on the anniversary date or date mutually agreeable to both parties.

This Agreement is revocable at any time upon thirty (30) days' written notice from either party to the other.

6. HOURS OF OPERATION

During the term of this Agreement, Licensee shall be permitted to operate and use the Premises for the purposes set forth in Section 3 and described in **Exhibit B**.

7. FEE

In consideration of the rights granted to Licensee under this agreement, Licensee shall pay the following Fee:

\$7,500.00

8. PERMITS

This agreement and all obligations hereunder are specifically dependent upon the

issuance to the Licensee of all permits and licenses required to operate and use the Premises for the purposes described in this Agreement from those governmental agencies having jurisdiction. It shall be the responsibility of Licensee to obtain any such permits or licenses, at Licensee's sole cost and expense. In the event Licensee is refused any such permit or license, this agreement shall be null and void with no further obligation by either party to perform. If any such permit or license is revoked or canceled during the term of this Agreement, it shall be cause for terminating this Agreement immediately as set forth in Section 18(c) hereof.

9. ALTERATION OF THE PREMISES

Licensee shall make no alterations or improvements upon the Premises except as may be specifically permitted in a separate Schedule attached to this License as **Exhibit C**. If no such Schedule is attached, Licensee shall not make any alterations or improvements upon the Premises after this Agreement has commenced unless Licensee has obtained the University's prior written approval, which may be withheld for any reason or for no reason in the University's sole discretion. Any alterations or improvements made by Licensee shall be made in accordance with the terms and conditions established by the University, which may include prior approval of plans, insurance coverage, and a requirement that Licensee remove any or all of its alterations or improvements upon the expiration or earlier termination of this Agreement. All such alterations or improvements remaining upon the Premises after the expiration of this License shall be subject to the provisions of Section 12 hereof. In any event, this Agreement does not for any purpose constitute the granting of an interest in real property and Licensee shall not have any right to make any permanent improvements to, or to install any permanent fixtures on, the Premises.

10. LICENSEE'S EQUIPMENT

Licensee may bring such vehicles and other equipment upon the premises as should ordinarily be used to operate and use the Premises for the purposes permitted by this Agreement, subject, however, to the following limitations outlined in **Exhibit B**.

11. UTILITIES

The University shall provide janitorial services for common areas of the buildings and general maintenance of the buildings and grounds. Heat, electric, water and sewer utilities are provided for the facilities as needed.

The University makes no representation as to the adequacy of utility systems for purposes of Licensee and shall not be responsible for any interruption in utility service.

12. CONDUCT OF LICENSEE

Non-interference with University Operations

Licensee shall at all times conduct itself so as not to interfere in any way with the operation of the University facility. Licensee agrees to observe and obey all directives given by

duly designated personnel of the University.

#### Compliance with Laws

Licensee shall at all times operate within the premises in accordance with all applicable laws, statutes, ordinances, regulations, permits, licenses, and requirements of its insurance policies.

#### Repair of Damage

Licensee shall neither cause nor suffer any waste of the premises and shall maintain the premises in good order at all times. The Licensee's responsibilities shall include, but not be limited to, the repair of any and all damage or breakage resulting from acts of vandalism or the intentional or negligent acts of the Licensee or others, but excluding damage or breakage caused by employees, agents or invitees of the University. All repairs made by Licensee shall be performed in a manner satisfactory to the University.

#### Sanitation

Licensee shall maintain the Premises in a sanitary condition and shall follow all directions of the University with regard to the collection and disposal of refuse as provided in **Exhibit B**.

#### Security

Licensee shall be responsible for providing, at its sole cost and expense, such security protection or services as may be reasonably necessary to protect the premises and Licensee's invitees from injury or damage.

#### Cost of Operations

Except as otherwise expressly set forth in this Agreement, Licensee shall be responsible for any and all costs and expenses associated with the exercise of its rights under this Agreement and its operations upon the Premises.

#### Operations Limited to Permitted Uses

Licensee shall not conduct, nor permit any of its employees, agents or invitees to conduct, any operations or business upon the Premises except for that permitted by Section 3 of this Agreement.

#### Hazardous Materials

Without limiting any of Licensee's obligations under this or any other Section of this Agreement, Licensee agrees that it shall not cause any hazardous materials to be used, generated, stored or disposed of on, under or about, or transported to or from the premises. For the purposes of this Agreement, "hazardous materials" shall include, but not be limited to substances defined as "hazardous substances", "toxic substances", "hazardous wastes", "hazardous materials", or "oil" in any federal or state statute concerning hazardous materials now or hereafter enacted, including all regulations adopted or publications promulgated thereunder.

Licensee's involved in research and plant propagation may use licensed pesticides, subject to all regulations. Plans for use and storage must be approved annually by Robert

Schrader.

Alcoholic Beverages

Unless specifically permitted by the terms of this Agreement, Licensee shall not serve alcoholic beverages upon the Premises, nor allow any of its employees, agents, contractors or invitees to bring or consume alcoholic beverages upon the Premises.

Surrender of Premises

Upon the expiration or earlier termination of this Agreement, Licensee shall immediately vacate and surrender the Premises to the University. However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises. Licensee shall also remove all of its property from the Premises and restore the Premises to the condition the Premises were in at the commencement of this Agreement, reasonable wear and tear excepted, and subject further to any obligation Licensee may have hereunder to make repairs or improvements to the Premises. Upon agreement of the parties, Licensee may abandon all or part of its property in place. In the event any of Licensee's personal property remains on the Premises after the expiration or earlier termination of this Agreement without a written agreement between the parties, said property shall be deemed abandoned and may be retained by University without any compensation to Licensee, or may be removed and either stored or disposed of by the University at the sole cost and expense of Licensee.

13. INDEMNIFICATION

Not Applicable

14. RISK OF LOSS

Licensee agrees that it shall use and occupy the Premises at its own risk, and the University shall not be liable to Licensee for any loss or damage to vehicles, equipment, fixtures, or other personal property of the Licensee that are brought upon the Premises. Without limiting the foregoing, the University shall have no liability to Licensee for any injury, loss or damage caused by any act of Licensee's invitees or members of the general public.

15. INSURANCE

The Licensee shall keep in force, at its sole cost and expense, during the full term of this License, and during such other times as Licensee occupies the Premises or any part thereof, the following insurance policies:

- A. Comprehensive public liability insurance in an amount as required by Massachusetts law.
- B. Vehicle Liability Insurance covering each vehicle of Licensee entering the Premises in an amount as required by Massachusetts law.

C. Workers Compensation Insurance covering Licensee's employees upon the Premises in such amounts as are required by law.

D. Such other types of insurance and in such amounts as the University may, from time to time, require in its reasonable judgment.

One or more certificates of insurance showing insurance coverage as required by this Section 15 are attached to this license as **Exhibit D**.

The insurance coverage required by this Section shall be by standard policies, obtained from financially sound and responsible insurance companies authorized to do business in Massachusetts. In the event Licensee fails to obtain any of the insurance coverage required by this section, or if any of the required insurance policies are canceled, it shall be grounds for immediate termination of this Agreement as provided in Section 18(c) of this agreement.

16. ASSIGNMENT

The Licensee shall not sell, assign, sublet, mortgage or transfer any interest in this Agreement or any part of the Premises without obtaining, in each instance, the prior written consent of the University, which consent may be withheld for any reason or for no reason, or granted upon such conditions as the University shall determine, all in its sole discretion.

17. RIGHTS OF UNIVERSITY AND AGENCY TO ENTER

The University reserves the right and the Licensee shall permit the University or its employees or agents to enter upon the Premises at any time to make repairs, perform maintenance, inspect the Premises, show the Premises to others, monitor compliance with this Agreement, or for any other reason.

18. TERMINATION

This Agreement shall expire on the date specified in Section 5, unless extended in compliance with the terms of this Agreement and all other requirements of law, or unless terminated earlier under the following conditions:

A. Without Cause. Either Licensee or the University may terminate this Agreement by giving written notice to the other party at least thirty (30) calendar days prior to the effective date of termination stated in the notice.

B. For Cause. If, in the opinion of University, Licensee fails to fulfill its obligations, The University may terminate this Agreement by giving written notice to the Licensee at least five (5) calendar days before the effective date of termination stated in the notice. The notice shall specify in reasonable detail the nature of Licensee's breach. The notice may also state a period during which the breach may be cured by Licensee, provided that such period shall expire on or before the termination date stated in the notice. In the event the Licensee is given an opportunity to cure its breach (which shall be within the sole discretion of the University) and Licensee fails



to complete such cure to the satisfaction of the University within the cure period, this Agreement shall come to an end on the termination date stated in the notice.

C. Emergency. In the event the University determines that it is necessary to terminate this Agreement or suspend Licensee's rights hereunder immediately in order to prevent injury or damage to persons or property, including the interest of the University in the Premises, the University may terminate this Agreement or suspend Licensee's rights hereunder by providing written notice to Licensee stating the grounds for said termination or suspension. Said notice may be given in the form of a telegram, mailgram, hand-carried letter, or other reasonable written means, and this License shall be terminated or suspended, as the case may be, upon delivery of said notice to Licensee.

In the event this Agreement is terminated in accordance with any of the provisions of this Section 18, this Agreement shall come to an end as fully and completely as if the term had expired on the date set forth in Section 5, and Licensee shall vacate and surrender the Premises as provided in Section 12.

In the event this Agreement is terminated by the University in accordance with any of the provisions of this Section 18, Licensee shall not be relieved of liability to the University for arrears in the License fees or for any other injury or damage sustained by the University as a result of a breach of Licensee of any of the terms or conditions of this Agreement, whether occurring before or after such termination. Licensee expressly waives any right to damages related to such termination, including incidental or consequential damages. If this Agreement is terminated for any reason that is not the fault of Licensee, then the fee which the Licensee has covenanted to pay, if any, shall be commensurately reduced by the University on a pro rata per diem basis, and Licensee shall receive a refund of any portion of the Agreement Fee that has been prepaid for a period during which the Licensee was denied use and occupancy of the Premises.

19. NO ESTATE CREATED

This Agreement shall not be construed as creating or vesting in Licensee any estate in the Premises, but only the limited right of possession as herein described, and Licensee shall have no right to require specific performance of the obligation of the University hereunder.

20. NON-DISCRIMINATION

Licensee shall not discriminate against any qualified employee, applicant for employment, subcontractor, or person or firm seeking to provide goods or services to Licensee, nor shall Licensee deny any person access to the Premises or to any activities or programs carried out pursuant to this Agreement because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation. The Licensee shall comply with all applicable federal and state statutes, rules, and regulations prohibiting discrimination in employment.

21. NOTICE

All notices or other communications required or permitted to be given under this Agreement shall, unless otherwise expressly permitted hereunder, be in writing signed by a duly authorized representative of the party giving the notice and shall be given by hand delivery (including, without limitation, courier, Federal Express, or other overnight delivery service) or mailed by United States certified mail, postage prepaid, return receipt requested. Such notices shall be sent or addressed to the University and Licensee at the addresses set forth in Section 1.

## 22. MISCELLANEOUS PROVISIONS

This Agreement may not be modified except in writing, duly executed by both parties.

This Agreement contains the entire agreement of the parties and there are no other agreements or understandings between the parties regarding the subject matter of this Agreement.

The University, its employees, officers or agents, are not authorized to bind or involve the Licensee or the Commonwealth of Massachusetts in any contract or to incur any liability for or on the part of the Licensee or the Commonwealth of Massachusetts.

If any portion of this Agreement is declared to be illegal, unenforceable or void, then all parties to this Agreement shall be relieved of all obligations under that portion; provided, however, that the remainder of this agreement shall be enforced to the fullest extent permitted by law.

No consent or waiver, whether express or implied, by the University to or of any breach of the terms of this Agreement by Licensee shall be construed as a consent or waiver to or of any other breach. No waiver of any breach or default or other indulgence shall be effective unless expressed in writing by the University.

The captions in this Agreement are inserted for convenience of reference only and in no way define, describe or limit the scope or intent of this Agreement or any of the provisions hereof.

No official, employee or consultant of the Commonwealth of Massachusetts (including any Trustee of the University of Massachusetts) shall be personally liable to Licensee or to any person claiming under or through Licensee for or on account of any alleged breach of this Agreement, or for any act, failure to act or other matter arising out of the execution of this Agreement or the performance of Licensee's obligations hereunder.

This Agreement shall be governed by, and construed in accordance with the laws of the Commonwealth of Massachusetts, and any and all legal actions brought in connection with this Agreement shall be brought in courts within the Commonwealth of Massachusetts.

No provision of this Agreement shall be deemed to have been waived by either party unless such waiver is in writing and is signed by the party to be charged.

This Agreement is to take effect as a sealed instrument.

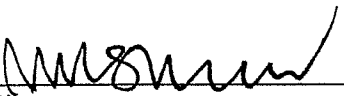
The following exhibits and attachments are made a part of this Agreement for all purposes:

- ☐ Exhibit A - Plan or Diagram of Premises to be Utilized by Licensee
- ☒ Exhibit B - Specific Rules Governing Access and Use of Facility
- ☐ Exhibit C - Schedule of Permitted Alterations and Improvements
- ☒ Exhibit D - Insurance Certificate(s)

**AGREED AND ACCEPTED**

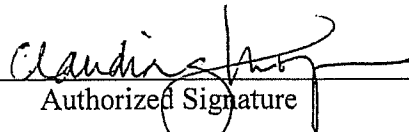
**UNIVERSITY OF  
MASSACHUSETTS:**

**LICENSEE:**

  
\_\_\_\_\_  
Signature

Joe Shoenfeld, Associate Director  
Center for Agriculture, Food and the  
Environment  
University of Massachusetts

8/29/18  
Date

  
\_\_\_\_\_  
Authorized Signature

Claudia Thompson  
Grow Native Massachusetts

9/6/2018  
Date



## **Exhibit B     Use of Grounds and Land at UMass Waltham, 240 Beaver Street, Waltham, Mass.**

### **Specific Rules Governing Access To and Use of Facility**

The following rules apply to use of the facility. All communications related to compliance with use rules and requests for permitted variances should be directed to Facility Manager (Tony Mazzeo) at the facility.

#### **General Rules:**

**Civility and Adherence to Rules:** Licensees are responsible for actions of their staff, guests and general public invited onto premises. Licensee is responsible for ensuring compliance with all facility rules.

**Hours of Operation:** Facility is open to licensees and their guests. The building is accessible from 6 AM-11 PM. Outside grounds are accessible from 6 AM till dark.

**Parking:** Parking is generally available in lots surrounding the building. No parking is allowed on the grass without prior approval. No vehicles are to be left overnight without prior approval.

**Persons Authorized to Have Access to Facility:** Each licensee is to provide to the Facility Manager a list of persons who will have regular access to the facility. All persons having regular access to the building must be over the age of 18. For persons utilizing space within the buildings this list will specifically identify those who are to receive building keys.

**Special Events:** Special events, such as plant sales, shows, educational programs and community events, which will use additional areas of the facility are permitted, subject to the approval of the University. Use of the facility can be scheduled through the Facility Manager. Additional fees may be charged to cover related costs to the University, such as staff time, rubbish removal, etc.

### **Operational Rules for Organizations Using the Grounds and Land**

**Facility Access:** The grounds are open to licensees from 6 AM - dark. Cars are to be driven onto grass areas only to load and unload materials or for handicapped access. Parking areas for handicapped access will be identified in advance.

**Staff Services:** University staff are responsible for operation and maintenance of the facility. University staff do not provide plant production or administrative services. Each organization must provide their own labor and related services.

**Rubbish and Organic Materials Removal:** Licensee is responsible for removing rubbish and recyclable materials to dumpsters and/or receptacles for recycling. Plant waste and related organic materials are to be discarded in areas identified by the facility manager.

**Site Maintenance & Appearance:** Assigned area must appear neat, clean, and orderly throughout the year. Refuse cannot be left at the site. End of the season clean-up is required. Details for clean-up and closing of land operations will be provided.

**Water and Utilities:** Water is generally provided to each site. Water conservation must be practiced. Water leaks are to be reported to the Facility Manager. All groups using more than an acre of land and the community garden group (GROW) will provide their own water meter in order to monitor use. The University will limit water use as deemed necessary.

**Alterations and Changes in Use of the Land:** The land can only be used for the purpose stated in the application form and Agreement. Any changes in use or changes to the land or landscape must be requested in writing to the Facility Manager. This includes pruning any surrounding trees or shrubs and adding structures, fencing, trellises or related items.

**Signage:** Small descriptive signs are to be posted at the site, identifying the organization, use of the land (purpose) and contact person for further information.

**Contacts and Communications:** All issues related to building and facility use should be brought to the attention of the Facility Manager, Tony Mazzeo.

Joe Shoenfeld  
Associate Director, UMass Center for Agriculture, Food and the Environment  
July, 2018

(Policy Provisions: 1000000000)

**INFORMATION PAGE**

**WORKERS COMPENSATION AND EMPLOYERS LIABILITY POLICY**

**INSURER:** The Hartford Fire Insurance Company  
ONE HARTFORD PLAZA HARTFORD CT 06155



NCCI Company Number:  
Company Code: 1

13269

**POLICY NUMBER:**  
**Previous Policy Number:**

02 WEC CR4707

02 WEC CR4707

Suffix	
LARS	RENEWAL
	4

1. **Named Insured and Mailing Address:** GROW NATIVE MASSACHUSETTS, INC.  
(No., Street, Town, State, Zip Code) 240 BEAVER ST  
WALTHAM MA 02452

**FEIN Number:** 27-3673855

**State Identification Number(s):**

**The Named Insured is:** Non Profit  
**Business of Named Insured:** Other Social Advocacy Organizations  
**Other workplaces not shown above:** 240 BEAVER STREET  
WALTHAM MA 02452

2. **Policy Period:** From 09/25/18 To 09/25/19 ANNUAL  
12:01 a.m., Standard time at the insured's mailing address.

**Producer's Name:** INSURANCE PROVIDER GROUP/PHS  
100 GREAT MEADOWS RD STE 705  
WETHERSFIELD CT 06109

**Producer's Code:** 02023411

**Issuing Office:** THE HARTFORD BUSINESS SERVICE CENTER  
3600 WISEMAN BLVD  
SAN ANTONIO TX 78251  
(866) 467-8730

**Total Estimated Annual Premium:** \$267

**Deposit Premium:**

**Policy Minimum Premium:** \$181 MA

**Audit Period:** ANNUAL

**Installment Term:** Full Pay (100%Down)

The policy is not binding unless countersigned by our authorized representative.

Countersigned by Susan L. Castaneda  
Authorized Representative

08/16/18  
Date



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
09/07/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> MBW DBA Insurance Provider Group  100 Great Meadow Rd Ste 705 Wethersfield CT 06109-2355	<b>CONTACT NAME:</b> Michelle Hinckley.	
	<b>PHONE (A/C, No, Ext):</b> (860)764-0555 <b>FAX (A/C, No):</b> (860)372-4972	
	<b>E-MAIL ADDRESS:</b> michelle@insuranceprovidergroup.com	
<b>INSURED</b>  Grow Native Massachusetts, Inc. 240 Beaver St.  Waltham MA 02452	<b>INSURER(S) AFFORDING COVERAGE</b>	<b>NAIC #</b>
	<b>INSURER A:</b> Mount Vernon Fire Ins co	
	<b>INSURER B:</b> Hartford Fire Insurance Co.	19682
	<b>INSURER C:</b>	
	<b>INSURER D:</b>	
	<b>INSURER E:</b>	
	<b>INSURER F:</b>	

## COVERAGES

CERTIFICATE NUMBER: 18-19 Master

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY			NPP2562494C	07/10/2018	07/10/2019	EACH OCCURRENCE \$ 1,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000
							MED EXP (Any one person) \$ 5,000
							PERSONAL & ADV INJURY \$ 1,000,000
							GENERAL AGGREGATE \$ 2,000,000
							PRODUCTS - COMPIOP AGG \$ Included
							D&O Liab-Non-Profit \$ 1,000,000
							COMBINED SINGLE LIMIT (Ea accident) \$
							BODILY INJURY (Per person) \$
							BODILY INJURY (Per accident) \$
			PROPERTY DAMAGE (Per accident) \$				
							\$ Included
	UMBRELLA LIAB						EACH OCCURRENCE \$
	EXCESS LIAB						AGGREGATE \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			02WECCR4707	09/25/2018	09/25/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	Y/N					E.L. EACH ACCIDENT \$ 100,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$ 100,000
							E.L. DISEASE - POLICY LIMIT \$ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Certificate Holder is included as Additional Insured as respects to the General Liability policy per written agreement/contract.

## CERTIFICATE HOLDER

## CANCELLATION

University of Massachusetts College of Natural Sciences 318D Stockbridge Hall  Amherst MA 01003	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 

© 1988-2015 ACORD CORPORATION. All rights reserved.



## **MEMORANDUM OF AGREEMENT AND GRANT OF LICENSE**

This Memorandum of Agreement and Grant of License is entered into on this 26<sup>th</sup> day of May, 2021 by and between the **University of Massachusetts Amherst**, having an address of 181 Presidents Drive, Amherst, Massachusetts 01003 (the "University" or "Licensor"), and **Tufts University c/o Colin Orians**, having an address of 364 Robinson Hall, 200 College Avenue – Tufts University, Medford, MA 02155 (the "Licensee"). The University and the Licensee may be referred to herein collectively as the "Parties".

WHEREAS, the University is the owner of certain property located at 240 Beaver Street, Waltham, Massachusetts (the "University Property");

WHEREAS, the Licensee desires to use approximately one (1) acre of the University Property for irrigation testing (the "Licensed Premises"). The Licensed Premises is depicted in **Exhibit A**, attached hereto and incorporated herein by reference.

WHEREAS, the University is amenable to granting the Licensee the foregoing rights, subject to the terms and conditions set forth below;

NOW, THEREFORE, in exchange for the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged by the Parties, the Parties agree as follows:

1. Term of License. The Term of this License shall begin on June 1, 2021 and shall thereafter continue on a month-to-month basis, terminable by Licensor or Licensee upon thirty (30) days' prior written notice to the other party.

2. Terms of Use; Permitted Use. The Licensee may enter and use the Licensed Premises at any time and from time to time during the Term for irrigation testing and related work ("Permitted Use"). The Licensee shall not interfere unreasonably with the use of the University Property by the University and others entitled thereto and shall comply with any reasonable rules and regulations governing the use of the University Property.

3. Fee. In exchange for the rights granted herein, Licensee shall pay Fifty Dollars (\$50.00) per month to the University on or before the first of each month, beginning on June 1, 2021.

4. Release, Indemnification. The University makes no representations or warranties as to the condition of the Licensed Premises. The Licensee releases and holds the University harmless against any claim by any of the Licensee for any injury or damage arising from said entry. The Licensee shall defend, indemnify and hold harmless the University from any and all liabilities, damages, loss, costs expenses (including reasonable attorneys' fees), causes of action, suits, claims, demands or judgments arising out of or related to the negligence of any of the Licensee in connection with said entry, and/or other activities undertaken in connection with this License, the exercise of the rights granted by this License, or the release, emission, storage or maintenance by any of the Licensee of any Hazardous Materials on or near the Licensed

Premises during said entry, or activities undertaken in connection with this License. The provisions contained in this Section shall survive the expiration or termination of this License.

5. Insurance. The Licensee shall obtain public liability insurance, including coverage for bodily injury, wrongful death and property damage, in the minimum amount set forth herein to support the Licensee's Permitted Use of the Licensed Premises under the terms and conditions of this License, to indemnify, defend and hold harmless the University: General Liability: \$1,000,000.00/occurrence, \$2,000,000.00/aggregate; Bodily Injury Liability: \$1,000,000.00/occurrence, \$2,000,000.00/aggregate. Prior to entering the University Property the Licensee shall provide the University with a copy of such insurance policy in each case indicating the University is an additional insured on the policy and showing compliance with the foregoing provisions. The insurance coverage required hereunder shall be issued by insurance companies licensed by the Massachusetts Division of Insurance to do business in the Commonwealth of Massachusetts and having a Best's rating of B+ or better. The Licensee also shall obtain Vehicle Liability Insurance covering each vehicle of Licensee entering University Property in an amount not less than the compulsory coverage required in Massachusetts. The Licensee's failure to carry insurance shall be a material default of this License.

6. Termination. Either party may terminate this License upon thirty (30) days prior written notice to the other party.

7. Surrender. In the event that this License expires or is terminated, the Licensee shall, at its own expense, remove all its facilities, apparatus, equipment and property from the Licensed Premises, and shall restore the Licensed Premises to their original condition as at the commencement of this License, as nearly as possible. This obligation shall survive the expiration or termination of this License.

8. The Licensee shall not use, generate, store or dispose of any Hazardous Materials on, under, about or within the Licensed Premises in violation of any law or regulation. As used in this paragraph, "Hazardous Material" shall mean any oil, hazardous waste, substances or materials, or pollutants, as such terms are defined under any existing or future statutory or common law (including but not limited to Comprehensive Environmental, Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq., the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6901 et seq., the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, G.L. c. 21E, and all applicable rules and regulations promulgated thereunder).

9. Authorized Representatives. In any case in which an approval, decision or permission is needed from one of the parties pursuant to this License or in connection with the matters contemplated herein, the following persons are authorized hereby to give such approval, decision or permission for the respective party:

For the University:

Name: Steven Goodwin, Deputy Chancellor  
Address: Room 374, Whitmore Administration Building

Email: 181 Presidents Drive, Amherst, MA 01003  
sgoodwin@cns.umass.edu

For the Licensee:

Name: Tufts University c/o Colin Orians  
Boston Area Climate Experiment  
Address: 364 Robinson Hall  
200 College Avenue – Tufts University  
Medford, MA 02155  
Telephone: 617-627-3543  
Email: colin.orians@tufts.edu

10. No Estate or Obligation Created. This License shall not be construed as creating or vesting in the Licensee any estate in the Property, but only the limited right of use as hereinabove stated.

11. Modifications and Amendments. Modifications or amendments to this License shall be in writing and duly executed by all the parties hereto to be effective.

12. Governing Law. This License shall be governed and construed in accordance with the laws of the Commonwealth of Massachusetts.

13. Entire Agreement. This License represents the entire agreement between the Parties and supersedes all other written or unwritten agreements between the Parties.

IN WITNESS THEREOF, the parties have signed this Memorandum of Agreement on the date first written above.

TUFTS UNIVERSITY

UNIVERSITY OF MASSACHUSETTS,  
AMHERST

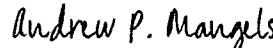
By: \_\_\_\_\_



Robert Chihade  
Director of Real Estate,  
Tufts University

By: \_\_\_\_\_

DocuSigned by:




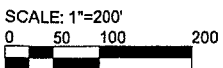
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Andrew P. Mangels  
Vice Chancellor for  
Administration & Finance

**EXHIBIT A**  
**MAP OF LICENSED PREMISES**



 Licensed Land



**EXHIBIT A**  
**B.A.S.E. / TUFTS**  
**LICENSED LAND**

6/25/2020



UMass Campus Planning

## SECOND EXTENSION OF LICENSE AGREEMENT

This Second Extension of License Agreement ("Second Extension") is made on December 15, 2020 by and between the University of Massachusetts Amherst ("University") and Boston Area Gleaners ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

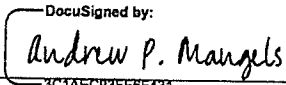
1. TERM: The term of the Agreement shall be extended on a month-to-month basis, terminable by Licensor or Licensee upon thirty (30) days' prior written notice to the other party.
2. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of Eight Hundred Thirty-three Dollars and Thirty-three cents (\$833.33) per month.
3. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Second Extension as of the date first written above.

**UNIVERSITY:**

UNIVERSITY OF MASSACHSETTS

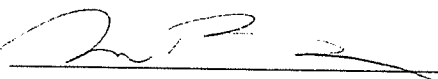
By:    
 3C1AEC93FF6F431...

Name: Andrew P. Mangels

Title: Vice Chancellor for Administration and Finance

**LICENSEE:**

BOSTON AREA GLEANERS

By: 

Name: Usha Thakrar

Title: Executive Director

### FIRST EXTENSION OF LICENSE AGREEMENT

This First Extension of License Agreement ("First Extension") is made on May 15, 2020 by and between the University of Massachusetts Amherst ("University") and Boston Area Gleaners ("Licensee").

WHEREAS, University and Licensee entered into an Agreement for Use of Office Facilities at the UMass Waltham Center dated July 31, 2018, for the Premises at 240 Beaver Street in Waltham, Massachusetts ("Agreement").

WHEREAS, Sections 5 and 22 of the Agreement provide that the parties may mutually agree to modifications to the Agreement in writing.

WHEREAS, University and Licensee wish to modify the Agreement as set forth below.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the receipt and sufficiency of which are hereby acknowledged, University and Licensee agree as follows:

1. Section 1 (Reference Data) of the Agreement shall be modified as follows:
  - a. Delete the Mailing Address of the University currently listed and replace same with: *"Steven Goodwin, Whitmore Administration Building Room 347, 181 Presidents Drive, Amherst, MA 01003"*.
  - b. Delete the Premises, Permitted Use, and Consideration text following the Mailing Address.
2. Delete the text of Section 2 (Location of the Premises) and replace same with:

*"2. PREMISES:*  
*Use of six (6) offices, numbering 201, 203, 211, 212, 213, and 214, all located on the second floor of the main building at 240 Beaver Street, Waltham, MA. In addition, non-exclusive use of the auditorium for long term dry storage. Use of land as shown in Exhibit A to park the Licensee's trucks overnight on the premises."*
3. TERM: The term of the Agreement shall be extended through December 31, 2020.
4. FEE: In consideration of the rights granted to Licensee under the Agreement and this Extension, Licensee shall pay to University a fee in the amount of Ten Thousand and 00/100 Dollars (\$10,000.00), payable in advance in monthly installments of Eight Hundred Thirty-three Dollars and Thirty-three cents (\$833.33) per month.
5. Section 12 (Surrender of Premises) is hereby amended by deleting the following language in its entirety: *"However, if the expiration or termination takes place after the onset of the*



*Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises."*

6. Section 12 (Hazardous Materials) is hereby amended to replace "Robert Schrader" with "the University's Environmental Health & Safety Office".
7. Section 15 (Insurance) is hereby amended to add the following to the end of the section:  
*"All certificates of insurance from Licensee shall list the University as an additional insured."*
8. Section 22 (Miscellaneous Provisions) is hereby amended by placing an "X" next to Exhibit A to indicate inclusion of same. Exhibit A showing land licensed is hereby attached and incorporated herein by reference.
9. Except as modified hereby, all other parts of the Agreement are ratified, confirmed and approved and shall remain in full force and effect in accordance with its terms.

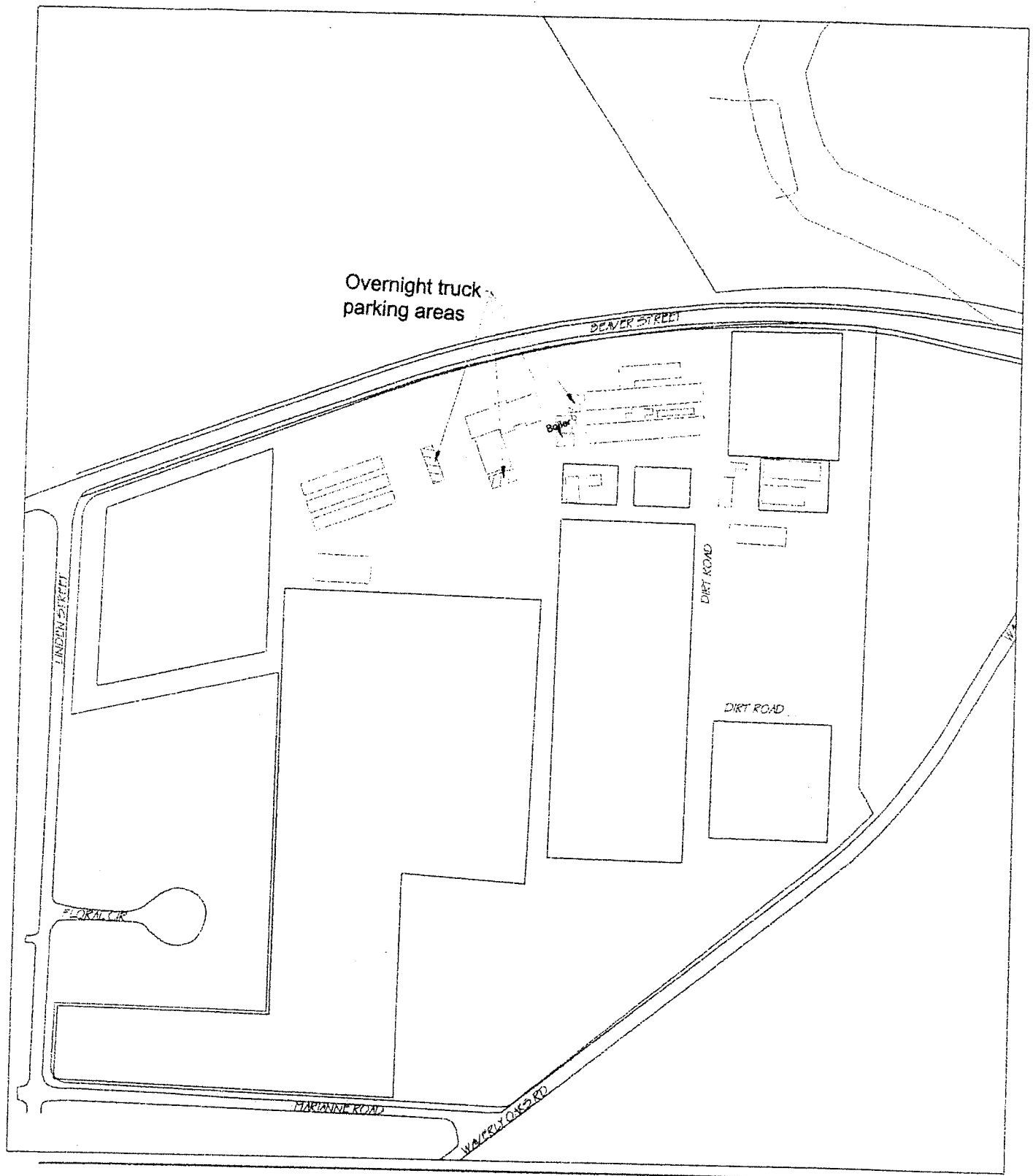
IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first written above.


**UNIVERSITY:**  
UNIVERSITY OF MASSACHSETTS

DocuSigned by:  
By: Andrew P. Mangels  
Name: Andrew P. Mangels  
Title: Vice Chancellor for Administration and Finance

**LICENSEE:**  
BOSTON AREA GLEANERS

By: [Signature]  
Name: Usha Thakrar  
Title: Executive Director



 Licensed Land

SCALE: 1"=200'  
0 50 100 200

**WALTHAM STATION**  
BOSTON AREA GLEANERS  
EXHIBIT A - LICENSED LAND

5/14/2020



UMass Campus Planning

JULY 1, 2018 - DECEMBER 31, 2019 18 MONTH LEASE CONTRACT

## Agreement and Conditions for Use of Office Facilities at the UMass Waltham Center

This Agreement provides conditions for use of office space at the U Mass Eastern Massachusetts Outreach Center. This agreement is between Boston Area Gleaners (hereinafter Licensee), a non profit corporation, and the University of Massachusetts (hereinafter referred to as the University).

WHEREAS, the University is the owner of certain real property located at 240 Beaver Street in Waltham and further described in Section 2 of this Agreement; and

WHEREAS, the University is responsible for the care, control and maintenance of said real property; and

WHEREAS, Licensee desires to enter upon said real property for the purposes described in this Agreement;

NOW, THEREFORE, the University hereby grants such entry and use subject to the following terms and conditions:

### 1. REFERENCE DATA:

Date of Agreement: July 31, 2018

Mailing Address of University:

Evan Pacosa  
318D Stockbridge Hall  
University of Massachusetts  
Amherst, MA 01003

Mailing Address of Licensee:

Boston Area Gleaners  
240 Beaver Street  
Waltham, MA 02452

Premises: Use of four offices. These rooms, number 201, 202, 211, & 212, are located on the 2<sup>nd</sup> floor of the main building at 240 Beaver Street, Waltham, MA

Permitted Use: The office will be used for administrative functions related to the mission of the organization.

Consideration to be Paid by Licensee: \$15,000.00 for office



UMass Extension  
Mass Water Resources Research Center  
Mass Agricultural Experiment Station  
UMass Research and Education Farms

Office of the Director • Stockbridge Hall • 80 Campus Center Way • Amherst, MA 01003-9246 • p 413 545 4800 • f 413 545 6555 • ag.umass.edu

August 20, 2018

Ms. Laurie Caldwell  
Executive Director  
Boston Area Gleaners  
240 Beaver Street  
Waltham, MA 02452

Dear Laurie,

Enclosed please find a License agreement for land and offices at Waltham for the period July 1, 2018, - December 31, 2019. The license fee is \$15,000.

Please note that there is a copy of Exhibit B attached to this agreement. Please note that the only substantive change to this document from the past is the addition, in the fourth rule listed, of the sentence: "All persons having regular access to the building must be over the age of 18."

Please sign and return one copy of the license agreement to me along with a copy of insurance certificates for liability and workman's compensation (if applicable). Sending by signed PDF is OK. The invoice for the office space at Waltham will be sent by the Business Office semiannually. Payment should be sent directly to my attention. Please also send a copy of your insurance binder naming UMass as an insured.

Please let me know if you have any questions regarding the license or invoice information.

Sincerely,

Evan Pacosa  
College of Natural Sciences  
Business Office

UMASS  
AMHERST

The Center for Agriculture, Food and the Environment and its staff are equal opportunity providers and employees. United States Department of Agriculture cooperating. Contact your local Extension office for information on disability accommodations. Contact the State Center Director's Office if you have concerns related to discrimination. 413-545-4800 or see ag.umass.edu/cv/ rights information/ diverse rights information resources.

2. LOCATION OF THE PREMISES

Entry and use are limited to the premises located at rooms 201, 202, 211, & 212.

3. PURPOSE AND USE

The rights of Licensee under this agreement shall be exercised solely for the following purposes: The office will be used for administrative functions related to the mission of the organization.

Specific rules governing access to and use of these facilities are attached as **Exhibit B** and are binding upon both parties.

4. CONDITION OF PREMISES

Licensee acknowledges and agrees that it accepts the Premises in "as is" condition, that Licensors are under no obligation to make any repairs, renovations, or alterations to the Premises, and that the University has made no representations or warranties regarding the fitness of the Premises for Licensee's intended purpose or use.

5. TERM

Term of Agreement: July 1, 2018 to December 31, 2019 unless otherwise terminated earlier in accordance with the terms of this Agreement.

The term of this Agreement may be extended on the following terms, subject to the prior written approval of the University: This Agreement will be reviewed annually on the anniversary date or date mutually agreeable to both parties.

This Agreement is revocable at any time upon thirty (30) days' written notice from either party to the other.

6. HOURS OF OPERATION

During the term of this Agreement, Licensee shall be permitted to operate and use the Premises for the purposes set forth in Section 3 and described in **Exhibit B**.

7. FEE

In consideration of the rights granted to Licensee under this agreement, Licensee shall pay the following Fee:

\$10,000.00

8. PERMITS

This agreement and all obligations hereunder are specifically dependent upon the

issuance to the Licensee of all permits and licenses required to operate and use the Premises for the purposes described in this Agreement from those governmental agencies having jurisdiction. It shall be the responsibility of Licensee to obtain any such permits or licenses, at Licensee's sole cost and expense. In the event Licensee is refused any such permit or license, this agreement shall be null and void with no further obligation by either party to perform. If any such permit or license is revoked or canceled during the term of this Agreement, it shall be cause for terminating this Agreement immediately as set forth in Section 18(c) hereof.

9. ALTERATION OF THE PREMISES

Licensee shall make no alterations or improvements upon the Premises except as may be specifically permitted in a separate Schedule attached to this License as **Exhibit C**. If no such Schedule is attached, Licensee shall not make any alterations or improvements upon the Premises after this Agreement has commenced unless Licensee has obtained the University's prior written approval, which may be withheld for any reason or for no reason in the University's sole discretion. Any alterations or improvements made by Licensee shall be made in accordance with the terms and conditions established by the University, which may include prior approval of plans, insurance coverage, and a requirement that Licensee remove any or all of its alterations or improvements upon the expiration or earlier termination of this Agreement. All such alterations or improvements remaining upon the Premises after the expiration of this License shall be subject to the provisions of Section 12 hereof. In any event, this Agreement does not for any purpose constitute the granting of an interest in real property and Licensee shall not have any right to make any permanent improvements to, or to install any permanent fixtures on, the Premises.

10. LICENSEE'S EQUIPMENT

Licensee may bring such vehicles and other equipment upon the premises as should ordinarily be used to operate and use the Premises for the purposes permitted by this Agreement, subject, however, to the following limitations outlined in **Exhibit B**.

11. UTILITIES

The University shall provide janitorial services for common areas of the buildings and general maintenance of the buildings and grounds. Heat, electric, water and sewer utilities are provided for the facilities as needed.

The University makes no representation as to the adequacy of utility systems for purposes of Licensee and shall not be responsible for any interruption in utility service.

12. CONDUCT OF LICENSEE

Non-interference with University Operations

Licensee shall at all times conduct itself so as not to interfere in any way with the operation of the University facility. Licensee agrees to observe and obey all directives given by

duly designated personnel of the University.

#### Compliance with Laws

Licensee shall at all times operate within the premises in accordance with all applicable laws, statutes, ordinances, regulations, permits, licenses, and requirements of its insurance policies.

#### Repair of Damage

Licensee shall neither cause nor suffer any waste of the premises and shall maintain the premises in good order at all times. The Licensee's responsibilities shall include, but not be limited to, the repair of any and all damage or breakage resulting from acts of vandalism or the intentional or negligent acts of the Licensee or others, but excluding damage or breakage caused by employees, agents or invitees of the University. All repairs made by Licensee shall be performed in a manner satisfactory to the University.

#### Sanitation

Licensee shall maintain the Premises in a sanitary condition and shall follow all directions of the University with regard to the collection and disposal of refuse as provided in **Exhibit B**.

#### Security

Licensee shall be responsible for providing, at its sole cost and expense, such security protection or services as may be reasonably necessary to protect the premises and Licensee's invitees from injury or damage.

#### Cost of Operations

Except as otherwise expressly set forth in this Agreement, Licensee shall be responsible for any and all costs and expenses associated with the exercise of its rights under this Agreement and its operations upon the Premises.

#### Operations Limited to Permitted Uses

Licensee shall not conduct, nor permit any of its employees, agents or invitees to conduct, any operations or business upon the Premises except for that permitted by Section 3 of this Agreement.

#### Hazardous Materials

Without limiting any of Licensee's obligations under this or any other Section of this Agreement, Licensee agrees that it shall not cause any hazardous materials to be used, generated, stored or disposed of on, under or about, or transported to or from the premises. For the purposes of this Agreement, "hazardous materials" shall include, but not be limited to substances defined as "hazardous substances", "toxic substances", "hazardous wastes", "hazardous materials", or "oil" in any federal or state statute concerning hazardous materials now or hereafter enacted, including all regulations adopted or publications promulgated thereunder.

Licensee's involved in research and plant propagation may use licensed pesticides, subject to all regulations. Plans for use and storage must be approved annually by Robert

Schrader.

Alcoholic Beverages

Unless specifically permitted by the terms of this Agreement, Licensee shall not serve alcoholic beverages upon the Premises, nor allow any of its employees, agents, contractors or invitees to bring or consume alcoholic beverages upon the Premises.

Surrender of Premises

Upon the expiration or earlier termination of this Agreement, Licensee shall immediately vacate and surrender the Premises to the University. However, if the expiration or termination takes place after the onset of the Licensee's farming season (January 1<sup>st</sup>) and is for anything other than a catastrophic event rendering the land unusable or due to misuse on the part of the Licensee, the Licensee shall be allowed to see their full growing season through to completion (Jan through December) before being required to vacate the Premises. Licensee shall also remove all of its property from the Premises and restore the Premises to the condition the Premises were in at the commencement of this Agreement, reasonable wear and tear excepted, and subject further to any obligation Licensee may have hereunder to make repairs or improvements to the Premises. Upon agreement of the parties, Licensee may abandon all or part of its property in place. In the event any of Licensee's personal property remains on the Premises after the expiration or earlier termination of this Agreement without a written agreement between the parties, said property shall be deemed abandoned and may be retained by University without any compensation to Licensee, or may be removed and either stored or disposed of by the University at the sole cost and expense of Licensee.

13. INDEMNIFICATION

Not Applicable

14. RISK OF LOSS

Licensee agrees that it shall use and occupy the Premises at its own risk, and the University shall not be liable to Licensee for any loss or damage to vehicles, equipment, fixtures, or other personal property of the Licensee that are brought upon the Premises. Without limiting the foregoing, the University shall have no liability to Licensee for any injury, loss or damage caused by any act of Licensee's invitees or members of the general public.

15. INSURANCE

The Licensee shall keep in force, at its sole cost and expense, during the full term of this License, and during such other times as Licensee occupies the Premises or any part thereof, the following insurance policies:

- A. Comprehensive public liability insurance in an amount as required by Massachusetts law.
- B. Vehicle Liability Insurance covering each vehicle of Licensee entering the Premises in an amount as required by Massachusetts law.



Workers Compensation Insurance covering Licensee's employees upon the Premises in such amounts as are required by law.

D. Such other types of insurance and in such amounts as the University may, from time to time, require in its reasonable judgment.

One or more certificates of insurance showing insurance coverage as required by this Section 15 are attached to this license as Exhibit D.

The insurance coverage required by this Section shall be by standard policies, obtained from financially sound and responsible insurance companies authorized to do business in Massachusetts. In the event Licensee fails to obtain any of the insurance coverage required by this section, or if any of the required insurance policies are canceled, it shall be grounds for immediate termination of this Agreement as provided in Section 18(c) of this agreement.

#### 16. ASSIGNMENT

The Licensee shall not sell, assign, sublet, mortgage or transfer any interest in this Agreement or any part of the Premises without obtaining, in each instance, the prior written consent of the University, which consent may be withheld for any reason or for no reason, or granted upon such conditions as the University shall determine, all in its sole discretion.

#### 17. RIGHTS OF UNIVERSITY AND AGENCY TO ENTER

The University reserves the right and the Licensee shall permit the University or its employees or agents to enter upon the Premises at any time to make repairs, perform maintenance, inspect the Premises, show the Premises to others, monitor compliance with this Agreement, or for any other reason.

#### 18. TERMINATION

This Agreement shall expire on the date specified in Section 5, unless extended in compliance with the terms of this Agreement and all other requirements of law, or unless terminated earlier under the following conditions:

A. Without Cause. Either Licensee or the University may terminate this Agreement by giving written notice to the other party at least thirty (30) calendar days prior to the effective date of termination stated in the notice.

B. For Cause. If, in the opinion of University, Licensee fails to fulfill its obligations, The University may terminate this Agreement by giving written notice to the Licensee at least five (5) calendar days before the effective date of termination stated in the notice. The notice shall specify in reasonable detail the nature of Licensee's breach. The notice may also state a period during which the breach may be cured by Licensee, provided that such period shall expire on or before the termination date stated in the notice. In the event the Licensee is given an opportunity to cure its breach (which shall be within the sole discretion of the University) and Licensee fails

to complete such cure to the satisfaction of the University within the cure period, this Agreement shall come to an end on the termination date stated in the notice.

C. Emergency. In the event the University determines that it is necessary to terminate this Agreement or suspend Licensee's rights hereunder immediately in order to prevent injury or damage to persons or property, including the interest of the University in the Premises, the University may terminate this Agreement or suspend Licensee's rights hereunder by providing written notice to Licensee stating the grounds for said termination or suspension. Said notice may be given in the form of a telegram, mailgram, hand-carried letter, or other reasonable written means, and this License shall be terminated or suspended, as the case may be, upon delivery of said notice to Licensee.

In the event this Agreement is terminated in accordance with any of the provisions of this Section 18, this Agreement shall come to an end as fully and completely as if the term had expired on the date set forth in Section 5, and Licensee shall vacate and surrender the Premises as provided in Section 12.

In the event this Agreement is terminated by the University in accordance with any of the provisions of this Section 18, Licensee shall not be relieved of liability to the University for arrears in the License fees or for any other injury or damage sustained by the University as a result of a breach of Licensee of any of the terms or conditions of this Agreement, whether occurring before or after such termination. Licensee expressly waives any right to damages related to such termination, including incidental or consequential damages. If this Agreement is terminated for any reason that is not the fault of Licensee, then the fee which the Licensee has covenanted to pay, if any, shall be commensurately reduced by the University on a pro rata per diem basis, and Licensee shall receive a refund of any portion of the Agreement Fee that has been prepaid for a period during which the Licensee was denied use and occupancy of the Premises.

19. NO ESTATE CREATED

This Agreement shall not be construed as creating or vesting in Licensee any estate in the Premises, but only the limited right of possession as herein described, and Licensee shall have no right to require specific performance of the obligation of the University hereunder.

20. NON-DISCRIMINATION

Licensee shall not discriminate against any qualified employee, applicant for employment, subcontractor, or person or firm seeking to provide goods or services to Licensee, nor shall Licensee deny any person access to the Premises or to any activities or programs carried out pursuant to this Agreement because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation. The Licensee shall comply with all applicable federal and state statutes, rules, and regulations prohibiting discrimination in employment.

21. NOTICE

All notices or other communications required or permitted to be given under this Agreement shall, unless otherwise expressly permitted hereunder, be in writing signed by a duly authorized representative of the party giving the notice and shall be given by hand delivery (including, without limitation, courier, Federal Express, or other overnight delivery service) or mailed by United States certified mail, postage prepaid, return receipt requested. Such notices shall be sent or addressed to the University and Licensee at the addresses set forth in Section 1.

## 22. MISCELLANEOUS PROVISIONS

This Agreement may not be modified except in writing, duly executed by both parties.

This Agreement contains the entire agreement of the parties and there are no other agreements or understandings between the parties regarding the subject matter of this Agreement.

The University, its employees, officers or agents, are not authorized to bind or involve the Licensee or the Commonwealth of Massachusetts in any contract or to incur any liability for or on the part of the Licensee or the Commonwealth of Massachusetts.

If any portion of this Agreement is declared to be illegal, unenforceable or void, then all parties to this Agreement shall be relieved of all obligations under that portion; provided, however, that the remainder of this agreement shall be enforced to the fullest extent permitted by law.

No consent or waiver, whether express or implied, by the University to or of any breach of the terms of this Agreement by Licensee shall be construed as a consent or waiver to or of any other breach. No waiver of any breach or default or other indulgence shall be effective unless expressed in writing by the University.

The captions in this Agreement are inserted for convenience of reference only and in no way define, describe or limit the scope or intent of this Agreement or any of the provisions hereof.

No official, employee or consultant of the Commonwealth of Massachusetts (including any Trustee of the University of Massachusetts) shall be personally liable to Licensee or to any person claiming under or through Licensee for or on account of any alleged breach of this Agreement, or for any act, failure to act or other matter arising out of the execution of this Agreement or the performance of Licensee's obligations hereunder.

This Agreement shall be governed by, and construed in accordance with the laws of the Commonwealth of Massachusetts, and any and all legal actions brought in connection with this Agreement shall be brought in courts within the Commonwealth of Massachusetts.

No provision of this Agreement shall be deemed to have been waived by either party unless such waiver is in writing and is signed by the party to be charged.

This Agreement is to take effect as a sealed instrument.

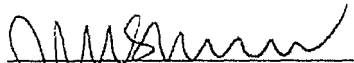
The following exhibits and attachments are made a part of this Agreement for all purposes:

- ☐ Exhibit A - Plan or Diagram of Premises to be Utilized by Licensee
- ☒ Exhibit B - Specific Rules Governing Access and Use of Facility
- ☐ Exhibit C - Schedule of Permitted Alterations and Improvements
- ☒ Exhibit D - Insurance Certificate(s)

**AGREED AND ACCEPTED**


**UNIVERSITY OF  
MASSACHUSETTS:**

**LICENSEE:**

  
Signature

Joe Shoenfeld, Associate Director  
Center for Agriculture, Food and the  
Environment  
University of Massachusetts

8/27/18  
Date

  
Authorized Signature

Laurie Caldwell, Executive Director  
Boston Area Gleaners

9/5/18  
Date

**Exhibit B     Use of Grounds and Land at UMass Waltham, 240 Beaver Street,  
Waltham, Mass.**

**Specific Rules Governing Access To and Use of Facility**

The following rules apply to use of the facility. All communications related to compliance with use rules and requests for permitted variances should be directed to Facility Manager (Tony Mazzeo) at the facility.

**General Rules:**

**Civility and Adherence to Rules:** Licensees are responsible for actions of their staff, guests and general public invited onto premises. Licensee is responsible for ensuring compliance with all facility rules.

**Hours of Operation:** Facility is open to licensees and their guests. The building is accessible from 6 AM-11 PM. Outside grounds are accessible from 6 AM till dark.

**Parking:** Parking is generally available in lots surrounding the building. No parking is allowed on the grass without prior approval. No vehicles are to be left overnight without prior approval.

**Persons Authorized to Have Access to Facility:** Each licensee is to provide to the Facility Manager a list of persons who will have regular access to the facility. All persons having regular access to the building must be over the age of 18. For persons utilizing space within the buildings this list will specifically identify those who are to receive building keys.

**Special Events:** Special events, such as plant sales, shows, educational programs and community events, which will use additional areas of the facility are permitted, subject to the approval of the University. Use of the facility can be scheduled through the Facility Manager. Additional fees may be charged to cover related costs to the University, such as staff time, rubbish removal, etc.

**Operational Rules for Organizations Using the Grounds and Land**

**Facility Access:** The grounds are open to licensees from 6 AM - dark. Cars are to be driven onto grass areas only to load and unload materials or for handicapped access. Parking areas for handicapped access will be identified in advance.

**Staff Services:** University staff are responsible for operation and maintenance of the facility. University staff do not provide plant production or administrative services. Each organization must provide their own labor and related services.

**Rubbish and Organic Materials Removal:** Licensee is responsible for removing rubbish and recyclable materials to dumpsters and/or receptacles for recycling. Plant waste and related organic materials are to be discarded in areas identified by the facility manager.

**Site Maintenance & Appearance:** Assigned area must appear neat, clean, and orderly throughout the year. Refuse cannot be left at the site. End of the season clean-up is required. Details for clean-up and closing of land operations will be provided.

**Water and Utilities:** Water is generally provided to each site. Water conservation must be practiced. Water leaks are to be reported to the Facility Manager. All groups using more than an acre of land and the community garden group (GROW) will provide their own water meter in order to monitor use. The University will limit water use as deemed necessary.

**Alterations and Changes in Use of the Land:** The land can only be used for the purpose stated in the application form and Agreement. Any changes in use or changes to the land or landscape must be requested in writing to the Facility Manager. This includes pruning any surrounding trees or shrubs and adding structures, fencing, trellises or related items.

**Signage:** Small descriptive signs are to be posted at the site, identifying the organization, use of the land (purpose) and contact person for further information.

**Contacts and Communications:** All issues related to building and facility use should be brought to the attention of the Facility Manager, Tony Mazzeo.

Joe Shoenfeld

Associate Director, UMass Center for Agriculture, Food and the Environment  
July, 2018



# CERTIFICATE OF LIABILITY INSURANCE

DATE: MM/DD/YYYY  
08/31/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S). AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER  
Aon Risk Services Northeast, Inc.  
Providence RI Office  
100 Westminster Street, 10th Floor  
Providence RI 02903-2393 USA

CONTACT  
NAME:  
PHONE (A/C No. Ext.): (266) 283-7122 FAX (A/C No.): (800) 361-0135  
E-MAIL ADDRESS:

INSURED  
University of Massachusetts  
333 South Street, Suite 450  
Shrewsbury MA 01545 USA

INSURER(S) AFFORDING COVERAGE  
INSURER A: United Educators Ins, a Reciprocal RRG  
INSURER B:  
INSURER C:  
INSURER D:  
INSURER E:  
INSURER F:

NAIC #  
10020

## COVERAGES

CERTIFICATE NUMBER: 570072547736

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  <input checked="" type="checkbox"/> GEN'L AGGREGATE LIMIT APPLIES PER <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO. <input type="checkbox"/> LOC <input type="checkbox"/> OTHER		U4075A SIR applies per policy terms & conditions	05/01/2018	05/01/2019	EACH OCCURRENCE \$750,000 DAMAGE TO RENTED PREMISES (Ea occurrence) Included MED EXP (Any one person) Excluded PERSONAL & ADV INJURY Included GENERAL AGGREGATE \$3,000,000 PRODUCTS - COMP OP AGS Included SIR \$250,000
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY					COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
A	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> RETENTION \$1,000,000		U4075A	05/01/2018	05/01/2019	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR, PARTNER / EXECUTIVE OR SELF-EMPLOYED EXCLUDED (Mandatory in NH) If all operations under DESCRIPTION OF OPERATIONS below	<input checked="" type="checkbox"/> N/A				PER STATUTE E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

## CERTIFICATE HOLDER

Boston Area Gleaners  
Attn: Laurie Caldwell  
240 Beaver Street  
Waltham MA 02457 USA

## CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

*Aon Risk Services Northeast Inc.*

Holder Identifier :

Certificate No : 570072547736



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
9/10/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> A & B INSURANCE GROUP LLC 235 Littleton Road, Unit 3 Westford, MA 01886		<b>CONTACT</b> NAME: PHONE (A/C, No. Ext): (978) 399-0025 FAX (A/C, No): (978) 399-0079 E-MAIL ADDRESS: wendy@abinsgroup.com		
<b>INSURED</b> Boston Area Gleaners, Inc 240 Beaver Street Waltham, MA 02452		<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC#</b>
		INSURER A: Nautilus		
		INSURER B: Commerce Ins Co		
		INSURER C:		
		INSURER D:		
		INSURER E:		
		INSURER F:		

## COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:


THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY			NN390628	12/14/17	12/14/18	EACH OCCURRENCE \$ 1,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000
							MED EXP (Any one person) \$ 5,000
							PERSONAL & ADV INJURY \$ 100,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE \$ 2,000,000
	<input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						PRODUCTS - COMPIOP AGG \$ 2,000,000
	OTHER						\$
B	AUTOMOBILE LIABILITY			BCSD43	12/1/17	12/1/18	COMBINED SINGLE LIMIT (Ea accident) \$ 500,000
	<input type="checkbox"/> ANY/AUTO	<input checked="" type="checkbox"/> SCHEDULED AUTOS					BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS	<input checked="" type="checkbox"/> NON-OWNED AUTOS					BODILY INJURY (Per accident) \$
	<input checked="" type="checkbox"/> HIRED AUTOS						PROPERTY DAMAGE (Per accident) \$
	UMBRELLA LIAB						\$
	EXCESS LIAB						\$
	DED						\$
	RETENTION \$						\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						\$
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						\$
	If yes, describe under DESCRIPTION OF OPERATIONS below						\$
B	Hired Physical Damage			BCSD43	12/1/17	12/1/18	1000 comp ded
							1000 coll ded

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

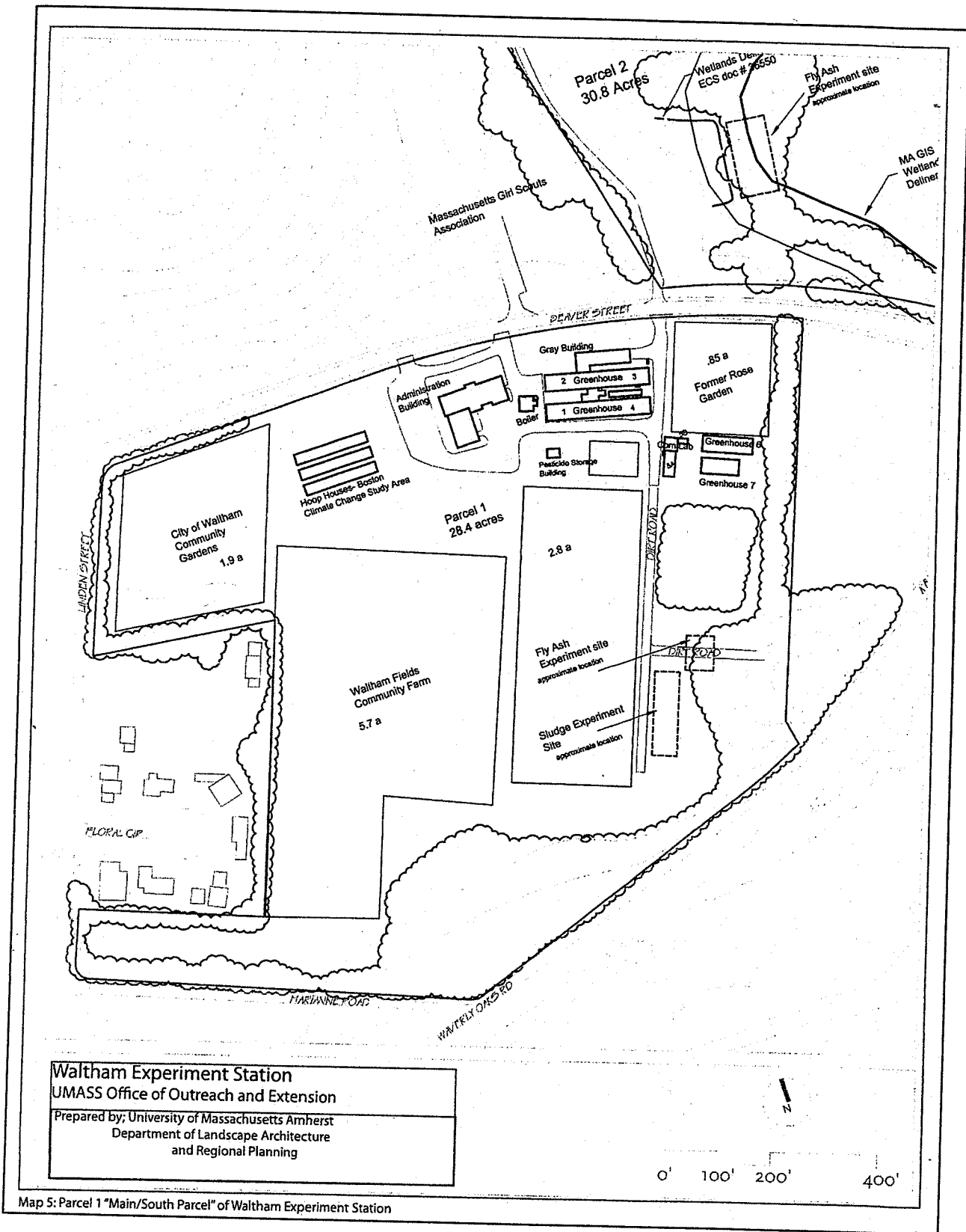
## CERTIFICATE HOLDER

## CANCELLATION

UMass Amherst The Center for Agriculture, Food, and Environment Stockbridge Hall 80 Campus Center Way Amherst MA 01003	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE 
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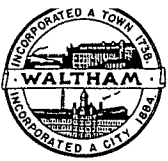


MAP PROVIDED BY UMASS



TREASURER DEPARTMENT INFORMATION  
REGARDING CORNELIA WARREN FARM AND FIELD HOUSE  
240 BEAVER STREET

0004735724202400000000000000100800103000000000000000010238003



# CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPT.  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO.	BILLING DATE
1008001	8/10/2022
DUE DATE	09/12/22
SERVICE ADDRESS	240 BEAVER ST

PAYABLE	ON OR BEFORE	09/12/22	\$102.38
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MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date	Usage	#Days
<b>Current</b>			
2553189	8,118 Estimate 07/26/2022		88
<b>Reading History</b>			
2553189	8,118 Estimate 07/26/2022		88
2553189	8,118 Actual 04/29/2022	0	112
2553189	8,118 Final Bill 01/07/2022	0	67
2553189	8,118 Actual 11/01/2021	4	95
2553189	8,114 Actual 07/29/2021	0	90

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$252.38
PAYMENTS THROUGH 08/10/2022	-\$252.38
ADJUSTMENTS THROUGH 08/10/2022	\$0.00
INTEREST AS OF: 09/12/2022	0.00
BALANCE FORWARD	\$0.00

Current Bill Detail	Usage/Unit	AMOUNT
Meter Rental - Eastern		\$20.00
Water Usage (2 - Eastern)		\$66.00
Sewer Usage (2 - Eastern)		\$16.38
Sub-Total		\$102.38
Total		\$102.38

Paid 9/2/22



# CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1008001

4735724



CITY OF WALTHAM  
C/O BUILDING DEPT.  
119 SCHOOL ST.  
WALTHAM MA 02452

PAYABLE	ON OR BEFORE	09/12/22	\$102.38
	AMOUNT PAID		

00047357242024000000000000001008001030000000000000010238003

## CITY OF WALTHAM

## WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

*RETAIN THIS PORTION FOR YOUR RECORDS*

CITY OF WALTHAM  
C/O BUILDING DEPT.  
119 SCHOOL ST.  
WALTHAM MA 02452

**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

Serial No	Reading & Date		Usage	#Days	
Current					
2553189	8,118	Actual	04/29/2022	0	112
Reading History					
2553189	8,118	Actual	04/29/2022	0	112
2553189	8,118	Final Bill	01/07/2022	0	67
2553189	8,118	Actual	11/01/2021	4	95
2553189	8,114	Actual	07/29/2021	0	90
2553189	8,114	Actual	04/30/2021	0	85

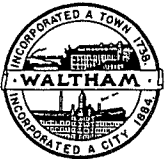
ACCOUNT NO.	BILLING DATE
1008001	5/9/2022
DUE DATE	
06/10/22	
SERVICE ADDRESS	
240 BEAVER ST	

P L A Y S E	ON OR BEFORE	06/10/22	▶	\$252.38

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$102.38
PAYMENTS THROUGH 05/09/2022	-\$102.38
ADJUSTMENTS THROUGH 05/09/2022	\$0.00
INTEREST AS OF: 06/10/2022	0.00
BALANCE FORWARD	\$0.00

<u>Current Bill Detail</u>	<u>Usage/Unit</u>	<u>AMOUNT</u>
Meter Rental - Eastern		\$20.00
Misc Cross Connect Fee - Eastern	2	\$150.00
Water Usage (2 - Eastern)		\$66.00
Sewer Usage (2 - Eastern)		\$16.38
	Sub-Total	\$252.38
	Total	<b>\$252.38</b>

Paid 6/3/22



**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

**Billing Information**  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

**BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM**

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

**FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN**

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1008001

4735724



CITY OF WALTHAM  
C/O BUILDING DEPT.  
119 SCHOOL ST.  
WALTHAM MA 02452

P L E A S E	ON OR BEFORE <b>06/10/22</b>	<b>\$252.38</b>
	AMOUNT PAID	

0004735724202400000000000000100800103000000000000000025238001

000473572420240000000000000001008001030000000000000000010238003

## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

## OFFICE HOURS

Mon - Fri.

8:30am to 4:30pm

*RETAIN THIS PORTION FOR YOUR RECORDS*

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1008001	11/4/2021
DUE DATE	
12/06/21	
SERVICE ADDRESS	
240 BEAVER ST	

P L A Y S E	ON OR BEFORE	12/06/21	▶	\$182.84

**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$252.38
PAYMENTS THROUGH 11/03/2021	-\$252.38
ADJUSTMENTS THROUGH 11/03/2021	\$0.00
INTEREST AS OF: 12/06/2021	0.00
BALANCE FORWARD	\$0.00

Serial No	Reading & Date		Usage	#Days
	<b>Current</b>			
2553189	8,118	Actual 11/01/2021	4	95
<b>Reading History</b>				
2553189	8,118	Actual 11/01/2021	4	95
2553189	8,114	Actual 07/29/2021	0	90
2553189	8,114	Actual 04/30/2021	0	85
2553189	8,114	Manual estimate 02/04/2021	0	98
2553189	8,114	Actual 10/29/2020	0	87

<u>Current Bill Detail</u>	<u>Usage/Unit</u>	<u>AMOUNT</u>
Meter Rental - Eastern		\$20.00
Misc Cross Connect Fee - Eastern		\$75.00
Water Usage (2 - Eastern)	400	\$66.00
Sewer Usage (2 - Eastern)	400	\$21.84
	Sub-Total	\$182.84
	Total	<b>\$182.84</b>

Paid 1/6/22



**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

### Billing Information

**(781)314-3810**

**BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM**

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1008001

**FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN**

4735724

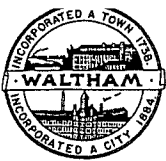


UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

P L E A S E	ON OR BEFORE 12/06/21	\$182.84
	AMOUNT PAID	

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1008001	8/10/2021
DUE DATE	
09/15/21	
SERVICE ADDRESS	
240 BEAVER ST	

P L E A S E	ON OR BEFORE	09/15/21	\$252.38

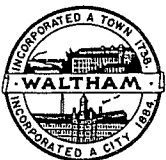
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
2553189	8,114	Actual 07/29/2021	0	90
Reading History				
2553189	8,114	Actual 07/29/2021	0	90
2553189	8,114	Actual 04/30/2021	0	85
2553189	8,114	Manual estimate 02/04/2021	0	98
2553189	8,114	Actual 10/29/2020	0	87
2553189	8,114	Actual 08/03/2020	0	95

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$102.38
PAYMENTS THROUGH 08/10/2021	-\$102.38
ADJUSTMENTS THROUGH 08/10/2021	\$0.00
INTEREST AS OF: 09/15/2021	0.00
BALANCE FORWARD	\$0.00

Current Bill Detail	Usage/Unit	AMOUNT
Meter Rental - Eastern		\$20.00
Misc Cross Connect Fee - Eastern	2	\$150.00
Water Usage (2 - Eastern)		\$66.00
Sewer Usage (2 - Eastern)		\$16.38
Sub-Total		\$252.38
Total		<b>\$252.38</b>

Paid 9/14/21

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1008001

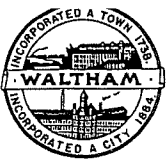
FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735724

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

P L E A S E	ON OR BEFORE	09/15/21	\$252.38
	AMOUNT PAID		

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**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1008001	5/10/2021
DUE DATE	
06/11/21	
SERVICE ADDRESS	
240 BEAVER ST	

ON OR BEFORE	06/11/21	\$102.38
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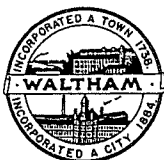
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
2553189	8,114	Actual 04/30/2021	0	85
Reading History				
2553189	8,114	Actual 04/30/2021	0	85
2553189	8,114	Manual estimate 02/04/2021	0	98
2553189	8,114	Actual 10/29/2020	0	87
2553189	8,114	Actual 08/03/2020	0	95
2553189	8,114	Actual 04/30/2020	1	111

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$177.38
PAYMENTS THROUGH 05/10/2021	-\$177.38
ADJUSTMENTS THROUGH 05/10/2021	\$0.00
INTEREST AS OF: 06/11/2021	0.00
BALANCE FORWARD	\$0.00

Current Bill Detail	Usage/Unit	AMOUNT
Meter Rental - Eastern		\$20.00
Water Usage (2 - Eastern)		\$66.00
Sewer Usage (2 - Eastern)		\$16.38
Sub-Total		\$102.38
Total		\$102.38

Paid 6/22/21



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1008001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735724

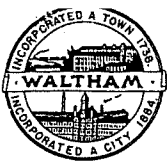


UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ON OR BEFORE	06/11/21	\$102.38
AMOUNT PAID		

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# CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO.	BILLING DATE
1010001	12/1/2022
DUE DATE	
12/30/22	
SERVICE ADDRESS	
240 BEAVER ST	

P L E A S E	ON OR BEFORE	12/30/22	\$500.47

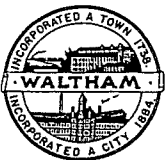
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,761	Actual 11/22/2022	21	28
Reading History				
1-0-28552	2,761	Actual 11/22/2022	21	28
1-0-28552	2,740	Actual 10/25/2022	20	29
1-0-28552	2,720	Actual 09/26/2022	10	31
1-0-28552	2,710	Actual 08/26/2022	11	32
1-0-28552	2,699	Actual 07/25/2022	9	28
1-0-28552	2,690	Actual 06/27/2022	13	30
1-0-28552	2,677	Actual 05/28/2022	18	33
1-0-28552	2,659	Actual 04/25/2022	23	32
1-0-28552	2,636	Actual 03/24/2022	31	35
1-0-28552	2,605	Actual 02/17/2022	35	28

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$474.81
PAYMENTS THROUGH 12/01/2022	-\$474.81
ADJUSTMENTS THROUGH 12/01/2022	\$0.00
BALANCE FORWARD	\$0.00

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	2,100	\$94.59
Monthly Sewer Usage	2,100	\$399.21
Monthly Meter Rental		\$6.67
Sub-Total		\$500.47
Total		\$500.47

*New not yet rd*



# CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

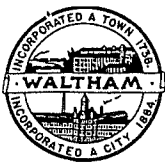
4735766



CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

P L E A S E	ON OR BEFORE	12/30/22	\$500.47
	AMOUNT PAID		

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# CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO.	BILLING DATE
1010001	11/1/2022
DUE DATE	
11/30/22	
SERVICE ADDRESS	
240 BEAVER ST	

ON OR BEFORE	11/30/22	\$474.81
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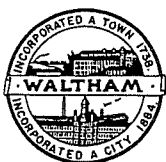
TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$230.71
PAYMENTS THROUGH 11/01/2022	-\$230.71
ADJUSTMENTS THROUGH 11/01/2022	\$0.00
BALANCE FORWARD	\$0.00

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,740	Actual 10/25/2022	20	29
Reading History				
1-0-28552	2,740	Actual 10/25/2022	20	29
1-0-28552	2,720	Actual 09/26/2022	10	31
1-0-28552	2,710	Actual 08/26/2022	11	32
1-0-28552	2,699	Actual 07/25/2022	9	28
1-0-28552	2,690	Actual 06/27/2022	13	30
1-0-28552	2,677	Actual 05/28/2022	18	33
1-0-28552	2,659	Actual 04/25/2022	23	32
1-0-28552	2,636	Actual 03/24/2022	31	35
1-0-28552	2,605	Actual 02/17/2022	35	28
1-0-28552	2,570	Actual 01/20/2022	24	14

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	2,000	\$87.94
Monthly Sewer Usage	2,000	\$380.20
Monthly Meter Rental		\$6.67
Sub-Total		\$474.81
Total		\$474.81

Paid 11/18/22



# CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing Information

(781)314-3810

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

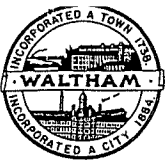
4735766



CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ON OR BEFORE	11/30/22	\$474.81
AMOUNT PAID		

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**CITY OF WALTHAM****WATER AND SEWER DIVISION**

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

OFFICE HOURS

Mon - Fri.

8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO.	BILLING DATE
1010001	10/3/2022
DUE DATE	
10/31/22	
SERVICE ADDRESS	
240 BEAVER ST	

P L A Y S E	ON OR BEFORE	10/31/22	▶	\$230.71

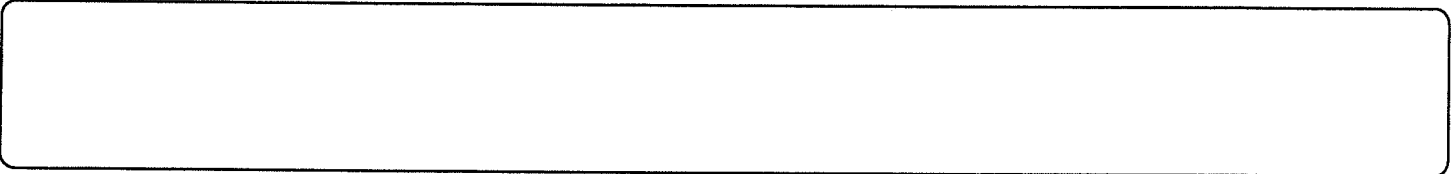
TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$253.87
PAYMENTS THROUGH 10/03/2022	-\$253.87
ADJUSTMENTS THROUGH 10/03/2022	\$0.00
BALANCE FORWARD	\$0.00

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,720	Actual 09/26/2022	10	31
Reading History				
1-0-28552	2,720	Actual 09/26/2022	10	31
1-0-28552	2,710	Actual 08/26/2022	11	32
1-0-28552	2,699	Actual 07/25/2022	9	28
1-0-28552	2,690	Actual 06/27/2022	13	30
1-0-28552	2,677	Actual 05/28/2022	18	33
1-0-28552	2,659	Actual 04/25/2022	23	32
1-0-28552	2,636	Actual 03/24/2022	31	35
1-0-28552	2,605	Actual 02/17/2022	35	28
1-0-28552	2,570	Actual 01/20/2022	24	14
1-0-28552	2,546	Final Bill 01/06/2022	16	17

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	1,000	\$33.94
Monthly Sewer Usage	1,000	\$190.10
Monthly Meter Rental		\$6.67
Sub-Total		\$230.71
Total		<b>\$230.71</b>

Paid 10/28/22

**CITY OF WALTHAM****WATER AND SEWER DIVISION**

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing Information

**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

P L A Y S E	ON OR BEFORE	10/31/22	▶	\$230.71
	AMOUNT PAID		▶	

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO.	BILLING DATE
1010001	9/1/2022
DUE DATE	
09/30/22	
SERVICE ADDRESS	
240 BEAVER ST	

P L A Y S E	ON OR BEFORE	09/30/22	▶	\$253.87

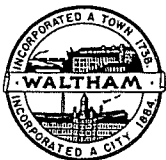
TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$507.74
PAYMENTS THROUGH 09/01/2022	-\$507.74
ADJUSTMENTS THROUGH 09/01/2022	\$0.00
BALANCE FORWARD	\$0.00

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,710	Actual 08/26/2022	11	32
Reading History				
1-0-28552	2,710	Actual 08/26/2022	11	32
1-0-28552	2,699	Actual 07/25/2022	9	28
1-0-28552	2,690	Actual 06/27/2022	13	30
1-0-28552	2,677	Actual 05/28/2022	18	33
1-0-28552	2,659	Actual 04/25/2022	23	32
1-0-28552	2,636	Actual 03/24/2022	31	35
1-0-28552	2,605	Actual 02/17/2022	35	28
1-0-28552	2,570	Actual 01/20/2022	24	14
1-0-28552	2,546	Final Bill 01/06/2022	16	17
1-0-28552	2,530	Actual 12/20/2021	25	28

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	1,100	\$38.09
Monthly Sewer Usage	1,100	\$209.11
Monthly Meter Rental		\$6.67
Sub-Total		\$253.87
Total		\$253.87

Paid 9/23/22

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

P L A Y S E	ON OR BEFORE	09/30/22	▶	\$253.87
	AMOUNT PAID			

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO.	BILLING DATE
1010001	8/1/2022
DUE DATE	
08/31/22	
SERVICE ADDRESS	
240 BEAVER ST	

P L E A S E	ON OR BEFORE	08/31/22	▶	\$507.74

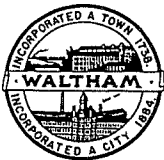
TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$723.68
PAYMENTS THROUGH 08/01/2022	-\$423.49
ADJUSTMENTS THROUGH 08/01/2022	\$0.00
BALANCE FORWARD	\$300.19

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,699	Actual 07/25/2022	9	28
Reading History				
1-0-28552	2,699	Actual 07/25/2022	9	28
1-0-28552	2,690	Actual 06/27/2022	13	30
1-0-28552	2,677	Actual 05/28/2022	18	33
1-0-28552	2,659	Actual 04/25/2022	23	32
1-0-28552	2,636	Actual 03/24/2022	31	35
1-0-28552	2,605	Actual 02/17/2022	35	28
9-28552	2,570	Actual 01/20/2022	24	14
J-28552	2,546	Final Bill 01/06/2022	16	17
1-0-28552	2,530	Actual 12/20/2021	25	28
1-0-28552	2,505	Actual 11/22/2021	26	33

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	900	\$29.79
Monthly Sewer Usage	900	\$171.09
Monthly Meter Rental		\$6.67
Sub-Total		\$207.55
Total		<b>\$507.74</b>

Paid 8/26/22

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

P L E A S E	ON OR BEFORE	08/31/22	▶	\$507.74
	AMOUNT PAID			

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**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190


Billing Information  
**(781)314-3810**

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

ACCOUNT NO.	BILLING DATE
1010001	7/1/2022
DUE DATE	
07/29/22	
SERVICE ADDRESS	
240 BEAVER ST	

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

PLEASE PAY	ON OR BEFORE	07/29/22		\$723.68

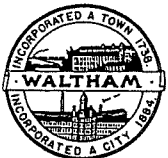
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,690	Actual 06/27/2022	13	30
Reading History				
1-0-28552	2,690	Actual 06/27/2022	13	30
1-0-28552	2,677	Actual 05/28/2022	18	33
1-0-28552	2,659	Actual 04/25/2022	23	32
1-0-28552	2,636	Actual 03/24/2022	31	35
1-0-28552	2,605	Actual 02/17/2022	35	28
1-0-28552	2,570	Actual 01/20/2022	24	14
1-0-28552	2,546	Final Bill 01/06/2022	16	17
1-0-28552	2,530	Actual 12/20/2021	25	28
1-0-28552	2,505	Actual 11/22/2021	26	33
1-0-28552	2,479	Actual 10/20/2021	15	28

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$423.49
PAYMENTS THROUGH 07/01/2022	\$0.00
ADJUSTMENTS THROUGH 07/01/2022	\$0.00
BALANCE FORWARD	\$423.49

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	1,300	\$46.39
Monthly Sewer Usage	1,300	\$247.13
Monthly Meter Rental		\$6.67
Sub-Total		\$300.19
Total		<b>\$723.68</b>

*Paid 8/12/22*



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

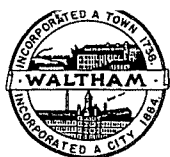


CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

PLEASE PAY ON OR BEFORE	07/29/22	\$723.68
	AMOUNT PAID	

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO.	BILLING DATE
1010001	5/2/2022
DUE DATE	
05/31/22	
SERVICE ADDRESS	
240 BEAVER ST	

PLEASE PAY ON OR BEFORE	05/31/22	▶	\$2,142.91

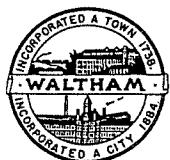
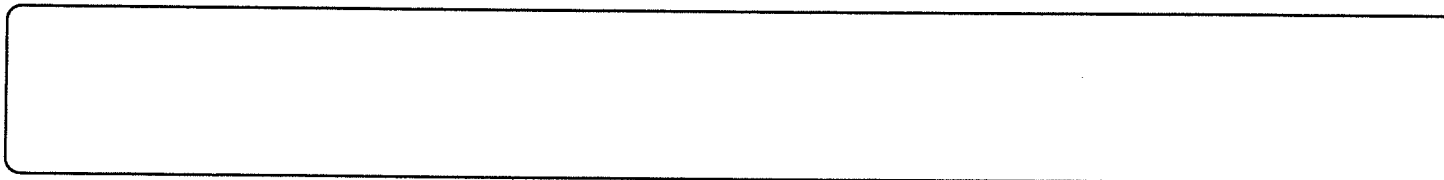
TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$1,591.12
PAYMENTS THROUGH 05/02/2022	\$0.00
ADJUSTMENTS THROUGH 05/02/2022	\$0.00
BALANCE FORWARD	\$1,591.12

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,659	Actual 04/25/2022	23	32
Reading History				
1-0-28552	2,659	Actual 04/25/2022	23	32
1-0-28552	2,636	Actual 03/24/2022	31	35
1-0-28552	2,605	Actual 02/17/2022	35	28
1-0-28552	2,570	Actual 01/20/2022	24	14
1-0-28552	2,546	Final Bill 01/06/2022	16	17
1-0-28552	2,530	Actual 12/20/2021	25	28
1-0-28552	2,505	Actual 11/22/2021	26	33
1-0-28552	2,479	Actual 10/20/2021	15	28
1-0-28552	2,464	Actual 09/22/2021	4	22
1-0-28552	2,460	Actual 08/31/2021	9	35

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	2,300	\$107.89
Monthly Sewer Usage	2,300	\$437.23
Monthly Meter Rental		\$6.67
Sub-Total		\$551.79
Total		<b>\$2,142.91</b>

Paid 5/20/22

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

PLEASE PAY ON OR BEFORE	05/31/22	▶	\$2,142.91
	AMOUNT PAID	▶	

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO.	BILLING DATE
1010001	4/1/2022
DUE DATE	
04/29/22	
SERVICE ADDRESS	
240 BEAVER ST	

ON OR BEFORE	04/29/22	\$1,591.12
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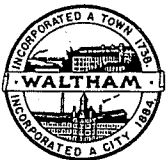
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,636	Actual 03/24/2022	31	35
Reading History				
1-0-28552	2,636	Actual 03/24/2022	31	35
1-0-28552	2,605	Actual 02/17/2022	35	28
1-0-28552	2,570	Actual 01/20/2022	24	14
1-0-28552	2,546	Final Bill 01/06/2022	16	17
1-0-28552	2,530	Actual 12/20/2021	25	28
1-0-28552	2,505	Actual 11/22/2021	26	33
1-0-28552	2,479	Actual 10/20/2021	15	28
1-0-28552	2,464	Actual 09/22/2021	4	22
1-0-28552	2,460	Actual 08/31/2021	9	35
1-0-28552	2,451	Actual 07/27/2021	8	34

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$1,809.23
PAYMENTS THROUGH 04/01/2022	-\$975.18
ADJUSTMENTS THROUGH 04/01/2022	\$0.00
BALANCE FORWARD	\$834.05

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	3,100	\$161.09
Monthly Sewer Usage	3,100	\$589.31
Monthly Meter Rental		\$6.67
Sub-Total		\$757.07
Total		<b>\$1,591.12</b>

Paid w/may

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ON OR BEFORE	04/29/22	\$1,591.12
AMOUNT PAID		

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# CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing  
Information  
(781)314-3810

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO.	BILLING DATE
1010001	3/1/2022
DUE DATE	
03/31/22	
SERVICE ADDRESS	
240 BEAVER ST	

ON OR BEFORE	03/31/22	\$1,809.23
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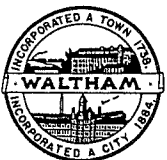
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,605	Actual 02/17/2022	35	28
Reading History				
1-0-28552	2,605	Actual 02/17/2022	35	28
1-0-28552	2,570	Actual 01/20/2022	24	14
1-0-28552	2,546	Final Bill 01/06/2022	16	17
1-0-28552	2,530	Actual 12/20/2021	25	28
1-0-28552	2,505	Actual 11/22/2021	26	33
1-0-28552	2,479	Actual 10/20/2021	15	28
1-0-28552	2,464	Actual 09/22/2021	4	22
1-0-28552	2,460	Actual 08/31/2021	9	35
1-0-28552	2,451	Actual 07/27/2021	8	34
1-0-28552	2,443	Actual 06/23/2021	9	34

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$1,552.63
PAYMENTS THROUGH 03/01/2022	-\$603.11
ADJUSTMENTS THROUGH 03/01/2022	\$0.00
BALANCE FORWARD	\$949.52

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	3,500	\$187.69
Monthly Sewer Usage	3,500	\$665.35
Monthly Meter Rental		\$6.67
Sub-Total		\$859.71
Total		\$1,809.23

*Paid w/ may*



# CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766



CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ON OR BEFORE	03/31/22	\$1,809.23
AMOUNT PAID		

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO.	BILLING DATE
1010001	2/1/2022
DUE DATE	
02/28/22	
SERVICE ADDRESS	
240 BEAVER ST	

P L A Y ▶	ON OR BEFORE	02/28/22	\$1,552.63

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,570	Actual 01/20/2022	24	14
Reading History				
1-0-28552	2,570	Actual 01/20/2022	24	14
1-0-28552	2,546	Final Bill 01/06/2022	16	17
1-0-28552	2,530	Actual 12/20/2021	25	28
1-0-28552	2,505	Actual 11/22/2021	26	33
1-0-28552	2,479	Actual 10/20/2021	15	28
1-0-28552	2,464	Actual 09/22/2021	4	22
1-0-28552	2,460	Actual 08/31/2021	9	35
1-0-28552	2,451	Actual 07/27/2021	8	34
1-0-28552	2,443	Actual 06/23/2021	9	34
1-0-28552	2,434	Actual 05/20/2021	19	28

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$975.18
PAYMENTS THROUGH 02/01/2022	\$0.00
ADJUSTMENTS THROUGH 02/01/2022	\$0.00
BALANCE FORWARD	\$975.18

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	2,400	\$114.54
Monthly Sewer Usage	2,400	\$456.24
Monthly Meter Rental		\$6.67
Sub-Total		\$577.45
Total		<b>\$1,552.63</b>

*Paid w/ my*

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

P L A Y ▶	ON OR BEFORE	02/28/22	\$1,552.63
	AMOUNT PAID		

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**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1010001	1/10/2022
DUE DATE	02/09/22
SERVICE ADDRESS	240 BEAVER ST

ON OR BEFORE	02/09/22	\$975.18
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MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date	Usage	#Days
<b>Current</b>			
1-0-28552	2,546 Final Bill 01/06/2022	16	17
<b>Reading History</b>			
1-0-28552	2,546 Final Bill 01/06/2022	16	17
1-0-28552	2,530 Actual 12/20/2021	25	28
1-0-28552	2,505 Actual 11/22/2021	26	33
1-0-28552	2,479 Actual 10/20/2021	15	28
1-0-28552	2,464 Actual 09/22/2021	4	22
1-0-28552	2,460 Actual 08/31/2021	9	35
1-0-28552	2,451 Actual 07/27/2021	8	34
1-0-28552	2,443 Actual 06/23/2021	9	34
1-0-28552	2,434 Actual 05/20/2021	19	28
1-0-28552	2,415 Actual 04/22/2021	29	30

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$1,075.78
PAYMENTS THROUGH 01/10/2022	-\$472.77
ADJUSTMENTS THROUGH 01/10/2022	\$0.00
BALANCE FORWARD	\$603.01

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	1,600	\$61.34
Monthly Sewer Usage	1,600	\$304.16
Monthly Meter Rental		\$6.67
Sub-Total		\$372.17
Total		\$975.18

*Paid 3/8/22*



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766



UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ON OR BEFORE	02/09/22	\$975.18
AMOUNT PAID		

0004735766202400000000000001010001030000000000000097518004

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1010001	1/3/2022
DUE DATE	
01/31/22	
SERVICE ADDRESS	
240 BEAVER ST	

PLEASE PAY	ON OR BEFORE	01/31/22	▶	\$1,075.78

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$963.54
PAYMENTS THROUGH 01/03/2022	-\$490.87
ADJUSTMENTS THROUGH 01/03/2022	\$0.00
BALANCE FORWARD	\$472.67

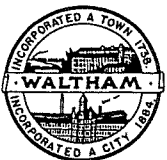
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,530	Actual 12/20/2021	25	28
Reading History				
1-0-28552	2,530	Actual 12/20/2021	25	28
1-0-28552	2,505	Actual 11/22/2021	26	33
1-0-28552	2,479	Actual 10/20/2021	15	28
1-0-28552	2,464	Actual 09/22/2021	4	22
1-0-28552	2,460	Actual 08/31/2021	9	35
1-0-28552	2,451	Actual 07/27/2021	8	34
1-0-28552	2,443	Actual 06/23/2021	9	34
1-0-28552	2,434	Actual 05/20/2021	19	28
1-0-28552	2,415	Actual 04/22/2021	29	30
1-0-28552	2,386	Actual 03/23/2021	40	35

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	2,500	\$121.19
Monthly Sewer Usage	2,500	\$475.25
Monthly Meter Rental		\$6.67
Sub-Total		\$603.11
Total		<b>\$1,075.78</b>

Paid 2/23/22

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

PLEASE PAY	ON OR BEFORE	01/31/22	▶	\$1,075.78
	AMOUNT PAID			

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1010001	12/1/2021
DUE DATE	
12/31/21	
SERVICE ADDRESS	
240 BEAVER ST	

P L A Y S E	ON OR BEFORE	12/31/21	\$963.54
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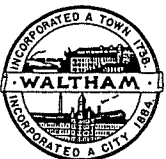
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,505	Actual 11/22/2021	26	33
Reading History				
1-0-28552	2,505	Actual 11/22/2021	26	33
1-0-28552	2,479	Actual 10/20/2021	15	28
1-0-28552	2,464	Actual 09/22/2021	4	22
1-0-28552	2,460	Actual 08/31/2021	9	35
1-0-28552	2,451	Actual 07/27/2021	8	34
1-0-28552	2,443	Actual 06/23/2021	9	34
1-0-28552	2,434	Actual 05/20/2021	19	28
1-0-28552	2,415	Actual 04/22/2021	29	30
1-0-28552	2,386	Actual 03/23/2021	40	35
1-0-28552	2,346	Actual 02/16/2021	66	26

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$490.77
PAYMENTS THROUGH 12/01/2021	\$0.00
ADJUSTMENTS THROUGH 12/01/2021	\$0.00
BALANCE FORWARD	\$490.77

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	2,600	\$127.84
Monthly Sewer Usage	2,600	\$338.26
Monthly Meter Rental		\$6.67
Sub-Total		\$472.77
Total		<b>\$963.54</b>

Paid 1/6/22

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

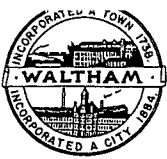
FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

P L A Y S E	ON OR BEFORE	12/31/21	\$963.54
	AMOUNT PAID		

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

ACCOUNT NO.	BILLING DATE
1010001	11/2/2021
DUE DATE	
11/30/21	
SERVICE ADDRESS	
240 BEAVER ST	

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ON OR BEFORE	11/30/21	\$490.77
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TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$234.26
PAYMENTS THROUGH 11/02/2021	\$0.00
ADJUSTMENTS THROUGH 11/02/2021	\$0.00
BALANCE FORWARD	\$234.26

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,479	Actual 10/20/2021	15	28
Reading History				
1-0-28552	2,479	Actual 10/20/2021	15	28
1-0-28552	2,464	Actual 09/22/2021	4	22
1-0-28552	2,460	Actual 08/31/2021	9	35
1-0-28552	2,451	Actual 07/27/2021	8	34
1-0-28552	2,443	Actual 06/23/2021	9	34
1-0-28552	2,434	Actual 05/20/2021	19	28
1-0-28552	2,415	Actual 04/22/2021	29	30
1-0-28552	2,386	Actual 03/23/2021	40	35
1-0-28552	2,346	Actual 02/16/2021	66	26
1-0-28552	2,280	Actual 01/21/2021	46	35

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	1,500	\$54.69
Monthly Sewer Usage	1,500	\$195.15
Monthly Meter Rental		\$6.67
Sub-Total		\$256.51
Total		<b>\$490.77</b>

Paid 12/14/21

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ON OR BEFORE	11/30/21	\$490.77
AMOUNT PAID		

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**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1010001	10/4/2021
DUE DATE	
10/29/21	
SERVICE ADDRESS	
240 BEAVER ST	

P L A Y S E	ON OR BEFORE	10/29/21	\$234.26

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$153.55
PAYMENTS THROUGH 10/04/2021	\$0.00
ADJUSTMENTS THROUGH 10/04/2021	\$0.00
BALANCE FORWARD	\$153.55

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,464	Actual 09/22/2021	4	22
Reading History				
1-0-28552	2,464	Actual 09/22/2021	4	22
1-0-28552	2,460	Actual 08/31/2021	9	35
1-0-28552	2,451	Actual 07/27/2021	8	34
1-0-28552	2,443	Actual 06/23/2021	9	34
1-0-28552	2,434	Actual 05/20/2021	19	28
1-0-28552	2,415	Actual 04/22/2021	29	30
1-0-28552	2,386	Actual 03/23/2021	40	35
1-0-28552	2,346	Actual 02/16/2021	66	26
1-0-28552	2,280	Actual 01/21/2021	46	35
1-0-28552	2,234	Actual 12/17/2020	38	30

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	400	\$22.00
Monthly Sewer Usage	400	\$52.04
Monthly Meter Rental		\$6.67
Sub-Total		\$80.71
Total		<b>\$234.26</b>

*Paid 12/6/21*



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

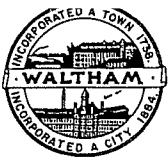
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UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

P L A Y S E	ON OR BEFORE	10/29/21	\$234.26
	AMOUNT PAID		

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**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1010001	9/3/2021
DUE DATE	
09/30/21	
SERVICE ADDRESS	
240 BEAVER ST	

PLEASE PLAY E	ON OR BEFORE	09/30/21	▶	\$153.55

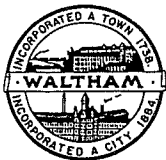
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,460	Actual 08/31/2021	9	35
Reading History				
1-0-28552	2,460	Actual 08/31/2021	9	35
1-0-28552	2,451	Actual 07/27/2021	8	34
1-0-28552	2,443	Actual 06/23/2021	9	34
1-0-28552	2,434	Actual 05/20/2021	19	28
1-0-28552	2,415	Actual 04/22/2021	29	30
1-0-28552	2,386	Actual 03/23/2021	40	35
1-0-28552	2,346	Actual 02/16/2021	66	26
1-0-28552	2,280	Actual 01/21/2021	46	35
1-0-28552	2,234	Actual 12/17/2020	38	30
1-0-28552	2,196	Actual 11/17/2020	37	26

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$625.09
PAYMENTS THROUGH 09/03/2021	-\$625.09
ADJUSTMENTS THROUGH 09/03/2021	\$0.00
BALANCE FORWARD	\$0.00

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	900	\$29.79
Monthly Sewer Usage	900	\$117.09
Monthly Meter Rental		\$6.67
Sub-Total		\$153.55
Total		<b>\$153.55</b>

*Paid next month*



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

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CITY OF WALTHAM

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NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766



UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

PLEASE PLAY E	ON OR BEFORE	09/30/21	▶	\$153.55
	AMOUNT PAID			

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

ACCOUNT NO.	BILLING DATE
1010001	8/2/2021
DUE DATE	
08/31/21	
SERVICE ADDRESS	
240 BEAVER ST	

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ON OR BEFORE	08/31/21	\$625.09
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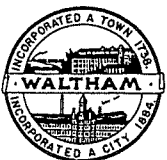
TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$488.70
PAYMENTS THROUGH 08/02/2021	\$0.00
ADJUSTMENTS THROUGH 08/02/2021	\$0.00
BALANCE FORWARD	\$488.70

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,451	Actual 07/27/2021	8	34
Reading History				
1-0-28552	2,451	Actual 07/27/2021	8	34
1-0-28552	2,443	Actual 06/23/2021	9	34
1-0-28552	2,434	Actual 05/20/2021	19	28
1-0-28552	2,415	Actual 04/22/2021	29	30
1-0-28552	2,386	Actual 03/23/2021	40	35
1-0-28552	2,346	Actual 02/16/2021	66	26
1-0-28552	2,280	Actual 01/21/2021	46	35
1-0-28552	2,234	Actual 12/17/2020	38	30
1-0-28552	2,196	Actual 11/17/2020	37	26
1-0-28552	2,159	Actual 10/22/2020	45	30

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	800	\$25.64
Monthly Sewer Usage	800	\$104.08
Monthly Meter Rental		\$6.67
Sub-Total		\$136.39
Total		<b>\$625.09</b>

Paid 8/31/21

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

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WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ON OR BEFORE	08/31/21	\$625.09
AMOUNT PAID		

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**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1010001	7/1/2021
DUE DATE	
07/30/21	
SERVICE ADDRESS	
240 BEAVER ST	

ON OR BEFORE	07/30/21	\$488.70
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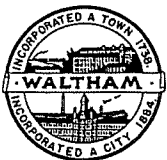
TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$335.15
PAYMENTS THROUGH 07/01/2021	\$0.00
ADJUSTMENTS THROUGH 07/01/2021	\$0.00
BALANCE FORWARD	\$335.15

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,443	Actual 06/23/2021	9	34
Reading History				
1-0-28552	2,443	Actual 06/23/2021	9	34
1-0-28552	2,434	Actual 05/20/2021	19	28
1-0-28552	2,415	Actual 04/22/2021	29	30
1-0-28552	2,386	Actual 03/23/2021	40	35
1-0-28552	2,346	Actual 02/16/2021	66	26
1-0-28552	2,280	Actual 01/21/2021	46	35
1-0-28552	2,234	Actual 12/17/2020	38	30
1-0-28552	2,196	Actual 11/17/2020	37	26
1-0-28552	2,159	Actual 10/22/2020	45	30
1-0-28552	2,114	Actual 09/22/2020	16	29

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	900	\$29.79
Monthly Sewer Usage	900	\$117.09
Monthly Meter Rental		\$6.67
Sub-Total		\$153.55
Total		\$488.70

*Paid 8/3/21*



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

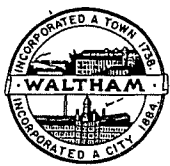


UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ON OR BEFORE	07/30/21	\$488.70
AMOUNT PAID		

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0004735766202300000000000000101000103000000000000000033515000

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1010001	5/3/2021
DUE DATE	
05/28/21	
SERVICE ADDRESS	
240 BEAVER ST	

P L E A S E	ON OR BEFORE	05/28/21	▶	\$1,279.76

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

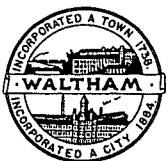
Serial No	Reading & Date			Usage	#Days
Current					
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Reading History					
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1-0-28552	2,386	Actual	03/23/2021	40	35
1-0-28552	2,346	Actual	02/16/2021	66	26
1-0-28552	2,280	Actual	01/21/2021	46	35
1-0-28552	2,234	Actual	12/17/2020	38	30
1-0-28552	2,196	Actual	11/17/2020	37	26
1-0-28552	2,159	Actual	10/22/2020	45	30
1-0-28552	2,114	Actual	09/22/2020	16	29
1-0-28552	2,098	Actual	08/24/2020	20	34
1-0-28552	2,078	Actual	07/21/2020	14	28

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$2,065.42
PAYMENTS THROUGH 05/03/2021	-\$1,317.41
ADJUSTMENTS THROUGH 05/03/2021	\$0.00
BALANCE FORWARD	\$748.01

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	2,900	\$147.79
Monthly Sewer Usage	2,900	\$377.29
Monthly Meter Rental		\$6.67
Sub-Total		\$531.75
Total		<b>\$1,279.76</b>

*Paid 5/25/21*

--

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

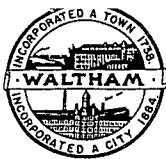
4735766

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

P L E A S E	ON OR BEFORE	05/28/21	▶	\$1,279.76
	AMOUNT PAID			

00047357662023000000000000010100010300000000000000127976005





**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1010001	4/1/2021
DUE DATE	
04/30/21	
SERVICE ADDRESS	
240 BEAVER ST	

PLAY ▶	ON OR BEFORE	04/30/21	\$2,065.42

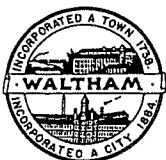
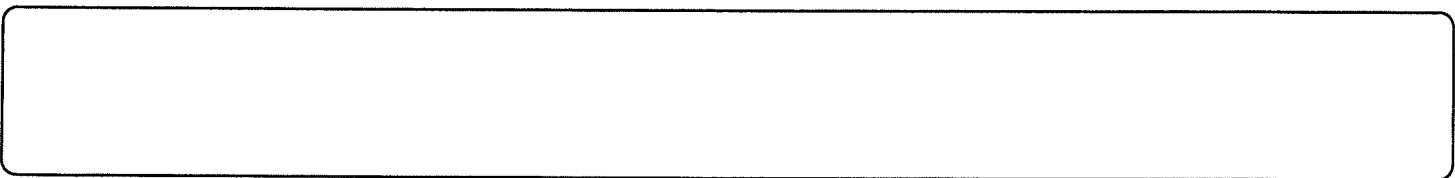
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-28552	2,386	Actual 03/23/2021	40	35
Reading History				
1-0-28552	2,386	Actual 03/23/2021	40	35
1-0-28552	2,346	Actual 02/16/2021	66	26
1-0-28552	2,280	Actual 01/21/2021	46	35
1-0-28552	2,234	Actual 12/17/2020	38	30
1-0-28552	2,196	Actual 11/17/2020	37	26
1-0-28552	2,159	Actual 10/22/2020	45	30
1-0-28552	2,114	Actual 09/22/2020	16	29
1-0-28552	2,098	Actual 08/24/2020	20	34
1-0-28552	2,078	Actual 07/21/2020	14	28
1-0-28552	2,064	Actual 06/23/2020	15	35

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$2,196.82
PAYMENTS THROUGH 04/01/2021	-\$879.41
ADJUSTMENTS THROUGH 04/01/2021	\$0.00
BALANCE FORWARD	\$1,317.41

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	4,000	\$220.94
Monthly Sewer Usage	4,000	\$520.40
Monthly Meter Rental		\$6.67
Sub-Total		\$748.01
Total		<b>\$2,065.42</b>

*Paid 5/4/21*



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

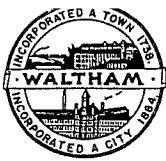
4735766



UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

PLAY ▶	ON OR BEFORE	04/30/21	\$2,065.42
	AMOUNT PAID		

000473576620230000000000000010100010300000000000000206542008



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1010001	3/1/2021
DUE DATE	
03/31/21	
SERVICE ADDRESS	
240 BEAVER ST	

ON OR BEFORE	03/31/21	\$2,196.82
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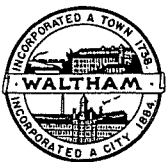
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
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Reading History				
1-0-28552	2,346	Actual 02/16/2021	66	26
1-0-28552	2,280	Actual 01/21/2021	46	35
1-0-28552	2,234	Actual 12/17/2020	38	30
1-0-28552	2,196	Actual 11/17/2020	37	26
1-0-28552	2,159	Actual 10/22/2020	45	30
1-0-28552	2,114	Actual 09/22/2020	16	29
1-0-28552	2,098	Actual 08/24/2020	20	34
1-0-28552	2,078	Actual 07/21/2020	14	28
1-0-28552	2,064	Actual 06/23/2020	15	35
1-0-28552	2,049	Actual 05/19/2020	19	25

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$1,588.10
PAYMENTS THROUGH 03/01/2021	-\$708.69
ADJUSTMENTS THROUGH 03/01/2021	\$0.00
BALANCE FORWARD	\$879.41

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	6,600	\$452.08
Monthly Sewer Usage	6,600	\$858.66
Monthly Meter Rental		\$6.67
Sub-Total		\$1,317.41
Total		\$2,196.82

*Paid 4/6/21*



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

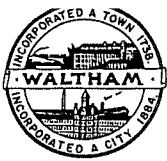
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UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ON OR BEFORE	03/31/21	\$2,196.82
AMOUNT PAID		

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1010001	2/1/2021
DUE DATE	
02/26/21	
SERVICE ADDRESS	
240 BEAVER ST	

P L A Y S E	ON OR BEFORE	02/26/21	\$1,588.10

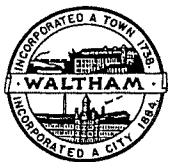
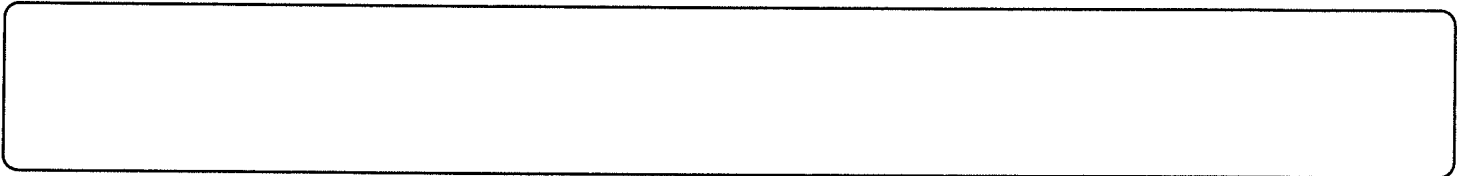
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
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Reading History				
1-0-28552	2,280	Actual 01/21/2021	46	35
1-0-28552	2,234	Actual 12/17/2020	38	30
1-0-28552	2,196	Actual 11/17/2020	37	26
1-0-28552	2,159	Actual 10/22/2020	45	30
1-0-28552	2,114	Actual 09/22/2020	16	29
1-0-28552	2,098	Actual 08/24/2020	20	34
1-0-28552	2,078	Actual 07/21/2020	14	28
1-0-28552	2,064	Actual 06/23/2020	15	35
1-0-28552	2,049	Actual 05/19/2020	19	25
1-0-28552	2,030	Actual 04/24/2020	27	30

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$708.69
PAYMENTS THROUGH 02/01/2021	\$0.00
ADJUSTMENTS THROUGH 02/01/2021	\$0.00
BALANCE FORWARD	\$708.69

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	4,600	\$274.28
Monthly Sewer Usage	4,600	\$598.46
Monthly Meter Rental		\$6.67
Sub-Total		\$879.41
Total		<b>\$1,588.10</b>

Paid 3/10/21

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12% PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

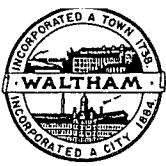
FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

P L A Y S E	ON OR BEFORE	02/26/21	\$1,588.10
	AMOUNT PAID		

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

ACCOUNT NO.	BILLING DATE
1010001	1/4/2021
DUE DATE	
01/29/21	
SERVICE ADDRESS	
240 BEAVER ST	

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ON OR BEFORE	01/29/21	\$708.69
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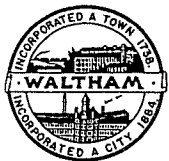
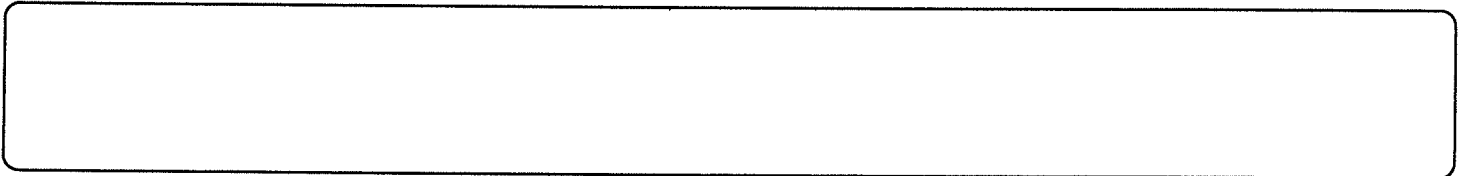
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
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Reading History				
1-0-28552	2,234	Actual 12/17/2020	38	30
1-0-28552	2,196	Actual 11/17/2020	37	26
1-0-28552	2,159	Actual 10/22/2020	45	30
1-0-28552	2,114	Actual 09/22/2020	16	29
1-0-28552	2,098	Actual 08/24/2020	20	34
1-0-28552	2,078	Actual 07/21/2020	14	28
1-0-28552	2,064	Actual 06/23/2020	15	35
1-0-28552	2,049	Actual 05/19/2020	19	25
1-0-28552	2,030	Actual 04/24/2020	27	30
1-0-28552	2,003	Actual 03/25/2020	40	34

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$1,546.54
PAYMENTS THROUGH 01/04/2021	-\$1,546.54
ADJUSTMENTS THROUGH 01/04/2021	\$0.00
BALANCE FORWARD	\$0.00

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	3,800	\$207.64
Monthly Sewer Usage	3,800	\$494.38
Monthly Meter Rental		\$6.67
Sub-Total		\$708.69
Total		<b>\$708.69</b>

Paid 2/5/21

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1010001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735766

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. P.O. REFERENCE #A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ON OR BEFORE	01/29/21	\$708.69
AMOUNT PAID		

0004735766202300000000000001010001030000000000000070869001

## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

*RETAIN THIS PORTION FOR YOUR RECORDS*

CITY OF WALTHAM  
C/O BUILDING DEPT.  
119 SCHOOL ST.  
WALTHAM MA 02452

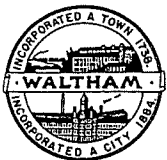
**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

Serial No	Reading & Date	Usage	#Days
<b>Current</b>			
2553189	8,118 Manual estir 10/25/2022	0	91
<b>Reading History</b>			
2553189	8,118 Manual estimate 10/25/2022	0	91
2553189	8,118 Estimate 07/26/2022		88
2553189	8,118 Actual 04/29/2022	0	112
2553189	8,118 Final Bill 01/07/2022	0	67
2553189	8,118 Actual 11/01/2021	4	95

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$102.38
PAYMENTS THROUGH 11/04/2022	-\$102.38
ADJUSTMENTS THROUGH 11/04/2022	\$0.00
INTEREST AS OF: 12/09/2022	0.00
BALANCE FORWARD	\$0.00

<u>Current Bill Detail</u>	<u>Usage/Unit</u>	<u>AMOUNT</u>
Meter Rental - Eastern		\$20.00
Water Usage (2 - Eastern)		\$66.00
Sewer Usage (2 - Eastern)		\$16.38
	Sub-Total	\$102.38
	Total	<b>\$102.38</b>

Paid 12/1/22



**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

**Billing Information**  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

**BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM**

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

**FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN**

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1008001

4735724



CITY OF WALTHAM  
C/O BUILDING DEPT.  
119 SCHOOL ST.  
WALTHAM MA 02452

P L E A S E	ON OR BEFORE 12/09/22	\$102.38
	AMOUNT PAID	

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## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

## OFFICE HOURS

Mon - Fri.

8:30am to 4:30pm

ACCOUNT NO	BILLING DATE
1008001	5/9/2022
DUE DATE	
06/10/22	
SERVICE ADDRESS	
240 BEAVER ST	

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPT.  
119 SCHOOL ST.  
WALTHAM MA 02452

P L A Y S E	ON OR BEFORE	06/10/22	▶	\$252.38

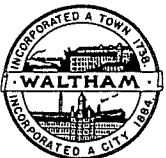
**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$102.38
PAYMENTS THROUGH 05/09/2022	-\$102.38
ADJUSTMENTS THROUGH 05/09/2022	\$0.00
INTEREST AS OF: 06/10/2022	0.00
BALANCE FORWARD	\$0.00

Serial No	Reading & Date		Usage	#Days
Current				
2553189	8,118	Actual 04/29/2022	0	112
Reading History				
2553189	8,118	Actual 04/29/2022	0	112
2553189	8,118	Final Bill 01/07/2022	0	67
2553189	8,118	Actual 11/01/2021	4	95
2553189	8,114	Actual 07/29/2021	0	90
2553189	8,114	Actual 04/30/2021	0	85

<u>Current Bill Detail</u>	<u>Usage/Unit</u>	<u>AMOUNT</u>
Meter Rental - Eastern		\$20.00
Misc Cross Connect Fee - Eastern	2	\$150.00
Water Usage (2 - Eastern)		\$66.00
Sewer Usage (2 - Eastern)		\$16.38
	Sub-Total	\$252.38
	Total	<b>\$252.38</b>

Paid 6/3/22



## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

## Billing Information

**(781)314-3810**

**BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM**

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1008001

**FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN**

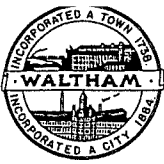
4735724



CITY OF WALTHAM  
C/O BUILDING DEPT.  
119 SCHOOL ST.  
WALTHAM MA 02452

P L E A S E	ON OR BEFORE 06/10/22	\$252.38
	AMOUNT PAID	

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**CITY OF WALTHAM****WATER AND SEWER DIVISION**POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1008001	1/10/2022
DUE DATE	
02/09/22	
SERVICE ADDRESS	
240 BEAVER ST	

P L E A S E	ON OR BEFORE	02/09/22	\$102.38

**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$182.84
PAYMENTS THROUGH 01/10/2022	-\$182.84
ADJUSTMENTS THROUGH 01/10/2022	\$0.00
INTEREST AS OF: 02/09/2022	0.00
BALANCE FORWARD	\$0.00

Serial No	Reading & Date	Usage	#Days
<b>Current</b>			
2553189	8,118 Final Bill 01/07/2022	0	67
<b>Reading History</b>			
2553189	8,118 Final Bill 01/07/2022	0	67
2553189	8,118 Actual 11/01/2021	4	95
2553189	8,114 Actual 07/29/2021	0	90
2553189	8,114 Actual 04/30/2021	0	85
2553189	8,114 Manual estimate 02/04/2021	0	98
2553189	8,114 Actual 10/29/2020	0	87

Current Bill Detail	Usage/Unit	AMOUNT
Meter Rental - Eastern		\$20.00
Water Usage (2 - Eastern)		\$66.00
Sewer Usage (2 - Eastern)		\$16.38
Sub-Total		\$102.38
Total		<b>\$102.38</b>

Paid 3/8/22

**CITY OF WALTHAM****WATER AND SEWER DIVISION**POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

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BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1008001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735724

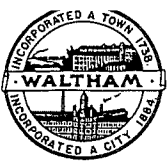
UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

P L E A S E	ON OR BEFORE	02/09/22	\$102.38
	AMOUNT PAID		

00047357242024000000000000001008001030000000000000010238003



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**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing Information  
(781)314-3810

OFFICE HOURS  
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UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1008001	8/10/2021
DUE DATE	
09/15/21	
SERVICE ADDRESS	
240 BEAVER ST	

ON OR BEFORE	09/15/21	\$252.38
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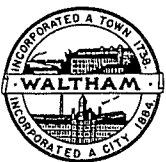
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$102.38
PAYMENTS THROUGH 08/10/2021	-\$102.38
ADJUSTMENTS THROUGH 08/10/2021	\$0.00
INTEREST AS OF: 09/15/2021	0.00
BALANCE FORWARD	\$0.00

Serial No	Reading & Date	Usage	#Days
<b>Current</b>			
2553189	8,114 Actual 07/29/2021	0	90
<b>Reading History</b>			
2553189	8,114 Actual 07/29/2021	0	90
2553189	8,114 Actual 04/30/2021	0	85
2553189	8,114 Manual estimate 02/04/2021	0	98
2553189	8,114 Actual 10/29/2020	0	87
2553189	8,114 Actual 08/03/2020	0	95

Current Bill Detail	Usage/Unit	AMOUNT
Meter Rental - Eastern		\$20.00
Misc Cross Connect Fee - Eastern	2	\$150.00
Water Usage (2 - Eastern)		\$66.00
Sewer Usage (2 - Eastern)		\$16.38
Sub-Total		\$252.38
Total		\$252.38

Paid 9/14/21



**CITY OF WALTHAM**  
WATER AND SEWER DIVISION

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MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
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INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1008001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735724



UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

ON OR BEFORE	09/15/21	\$252.38
AMOUNT PAID		

00047357242023000000000000001008001030000000000000025238004

## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

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ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

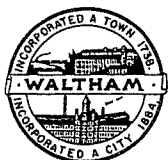
**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

Serial No	Reading & Date		Usage	#Days
Current				
2553189	8,114	Actual 04/30/2021	0	85
Reading History				
2553189	8,114	Actual 04/30/2021	0	85
2553189	8,114	Manual estimate 02/04/2021	0	98
2553189	8,114	Actual 10/29/2020	0	87
2553189	8,114	Actual 08/03/2020	0	95
2553189	8,114	Actual 04/30/2020	1	111

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$177.38
PAYMENTS THROUGH 05/10/2021	-\$177.38
ADJUSTMENTS THROUGH 05/10/2021	\$0.00
INTEREST AS OF: 06/11/2021	0.00
BALANCE FORWARD	\$0.00

<u>Current Bill Detail</u>	<u>Usage/Unit</u>	<u>AMOUNT</u>
Meter Rental - Eastern		\$20.00
Water Usage (2 - Eastern)		\$66.00
Sewer Usage (2 - Eastern)		\$16.38
	Sub-Total	\$102.38
	Total	<b>\$102.38</b>

Paid 6/22/21



**CITY OF WALTHAM**

WATER AND SEWER DIVISION

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12 % PER YEAR

**FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN**

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1008001

4735724



UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CENTER WAY  
AMHERST MA 01003

P L E A S E	ON OR BEFORE <b>06/11/21</b>	<b>\$102.38</b>
	AMOUNT PAID	

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0004735724202300000000000000100800103000000000000000017738000

**TREASURER'S DEPARTMENT INFORMATION  
REGARDING CORNELIA WARREN FARM AND FIELD HOUSE  
240 BEAVER STREET**

## DiGregorio, Donna

---

**From:** DiGregorio, Donna  
**Sent:** Wednesday, December 7, 2022 11:32 AM  
**To:** Magno, Tom; Lacava, Suzanne; O'Malley, Martin  
**Subject:** 240 Beaver Street, Waltham

All:

I need the water bills paid for calendar years 2021 and 2022, and any monies received for rent, permit fees or any other receipts for the same two calendar years 2021 and 2022.

I need this information for the City Council Docket, so I need it today.

Thank you.

Mayor McCarthy

P.S. I don't think there is any rent paid, but maybe a receipt for a permit from either Building or Fire. I don't believe there is anything else, but I do need the amount of water bills.

## Magno, Tom

---

**From:** DiGregorio, Donna  
**Sent:** Wednesday, December 7, 2022 11:32 AM  
**To:** Magno, Tom; Lacava, Suzanne; O'Malley, Martin  
**Subject:** 240 Beaver Street, Waltham

All:

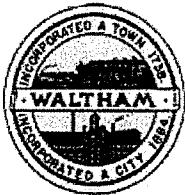
I need the water bills paid for calendar years 2021 and 2022, and any monies received for rent, permit fees or any other receipts for the same two calendar years 2021 and 2022.

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Mayor McCarthy

P.S. I don't think there is any rent paid, but maybe a receipt for a permit from either Building or Fire. I don't believe there is anything else, but I do need the amount of water bills.



# City of Waltham

## Online Permit Information

[Back to Property Information](#)

Page 1 of 1

### Permit Information

Type / Category	Building Department	Building Permit
Application No./Date	A202242010	05/18/2022
Permit No./Date	P202241985	05/18/2022
Certificate No./Date		
Total Fee	\$ 26	
Purpose / Notes & Comment / Work Description		
FOUR 20 X 30 TENTS		

### Linked Names

Owner name	COMMONWEALTH OF MASS., C/O CITY OF WALTHAM 610 MAIN ST. WALTHAM MA 02452-8022
Authorized Agent	BARRY PERLA 12 MIDDLE ST LEOMINSTER MA

### Permit Activity Information

Type / Category	Started	Completed	Status
Application Accepted	05/18/2022	05/18/2022	Yes
Issue Permit	05/18/2022	05/18/2022	Yes





# City of Waltham

## Online Permit Information

[Back to Property Information](#)

Page 1 of 1

### Permit Information

Type / Category	Fire Department	General Permit
Application No./Date	A202100444	05/05/2021
Permit No./Date	F202100161	05/05/2021
Certificate No./Date		
Total Fee	\$ 50	
Purpose / Notes & Comment / Work Description		
Storage of (7) 33 lb. propane cylinders for use of forklift.		

### Linked Names

Fuel Co	BOSTON AREA GLEANERS 240 BEAVER STREET WALTHAM MA 02452
---------	---

### Permit Activity Information

Type / Category	Started	Completed	Status
Application Received	05/05/2021	05/05/2021	Yes
Issue Permit	05/05/2021	05/05/2021	Yes

## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

ACCOUNT NO	BILLING DATE
1009001	12/1/2022
DUE DATE	
12/30/22	
SERVICE ADDRESS	
240 BEAVER ST	

*RETAIN THIS PORTION FOR YOUR RECORDS*

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

PLAY DATE	ON OR BEFORE	12/30/22		\$523.20

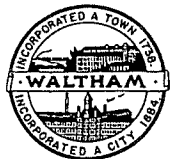
TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$389.85
PAYMENTS THROUGH 12/01/2022	-\$389.85
ADJUSTMENTS THROUGH 12/01/2022	\$0.00
BALANCE FORWARD	\$0.00

**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

Serial No	Reading & Date		Usage	#Days	
Current					
1-0-10898	66	Actual	11/21/2022	1	27
1-0-10899	2,729	Actual	11/22/2022	73	28
Reading History					
1-0-10899	2,729	Actual	11/22/2022	73	28
1-0-10898	66	Actual	11/21/2022	1	27
1-0-10899	2,656	Actual	10/25/2022	58	29
1-0-10898	65	Actual	10/25/2022	1	29
1-0-10899	2,598	Actual	09/26/2022	42	31
1-0-10898	64	Actual	09/26/2022	1	31
1-0-10899	2,556	Actual	08/26/2022	55	32
1-0-10898	63	Actual	08/26/2022	5	33
1-0-10899	2,501	Actual	07/25/2022	41	28
1-0-10898	58	Actual	07/24/2022	3	29

<u>Current Bill Detail</u>	<u>Usage/Unit</u>	<u>AMOUNT</u>
Monthly Water Usage	7,400	\$523.20
	Sub-Total	\$523.20
	Total	\$523.20

New bot jet Rd



## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

**Billing Information**  
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**BILL PAYABLE ON RECEIPT  
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CITY OF WALTHAM**

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NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
**12 % PER YEAR**

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1009001

**FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN**

4735740



CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

PLEASE PAY	ON OR BEFORE <b>12/30/22</b>	<b>\$523.20</b>
	AMOUNT PAID	

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## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

## OFFICE HOURS

Mon - Fri.

8:30am to 4:30pm

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CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

Serial No	Reading & Date		Usage	#Days	
Current					
1-0-10898	64	Actual	09/26/2022	1	31
1-0-10899	2,598	Actual	09/26/2022	42	31
Reading History					
1-0-10899	2,598	Actual	09/26/2022	42	31
1-0-10898	64	Actual	09/26/2022	1	31
1-0-10899	2,556	Actual	08/26/2022	55	32
1-0-10898	63	Actual	08/26/2022	5	33
1-0-10899	2,501	Actual	07/25/2022	41	28
1-0-10898	58	Actual	07/24/2022	3	29
1-0-10899	2,460	Actual	06/27/2022	40	30
1-0-10898	55	Actual	06/25/2022	0	28
1-0-10899	2,420	Actual	05/28/2022	22	33
1-0-10898	55	Actual	05/28/2022	0	33

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$398.74
PAYMENTS THROUGH 10/03/2022	-\$398.74
ADJUSTMENTS THROUGH 10/03/2022	\$0.00
BALANCE FORWARD	\$0.00

<u>Current Bill Detail</u>	<u>Usage/Unit</u>	<u>AMOUNT</u>
Monthly Water Usage	4,300	\$247.61
	Sub-Total	\$247.61
	Total	\$247.61

Paid 10/28/22



## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

### Billing Information

**(781)314-3810**

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CITY OF WALTHAM**

ANY AMOUNT WHICH IS  
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INTEREST CHARGES OF  
12 % PER YEAR

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1009001

**FAILURE TO PAY A PAST DUE BALANCE MAY RESULT IN A PROPERTY TAX LIEN**

4735740

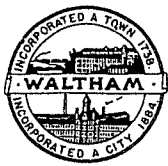


CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

PLEASE	ON OR BEFORE	10/31/22		\$247.61
	AMOUNT PAID			

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
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CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO.	BILLING DATE
1009001	8/1/2022
DUE DATE	
08/31/22	
SERVICE ADDRESS	
240 BEAVER ST	

ON OR BEFORE	08/31/22	\$477.44
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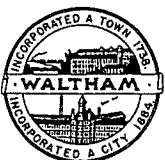
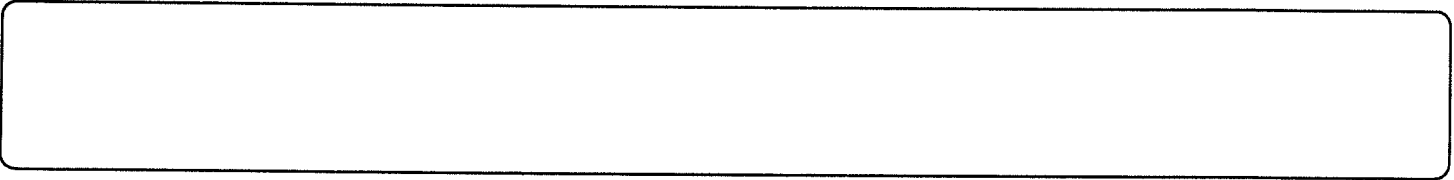
MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-10898	58	Actual 07/24/2022	3	29
1-0-10899	2,501	Actual 07/25/2022	41	28
Reading History				
1-0-10899	2,501	Actual 07/25/2022	41	28
1-0-10898	58	Actual 07/24/2022	3	29
1-0-10899	2,460	Actual 06/27/2022	40	30
1-0-10898	55	Actual 06/25/2022	0	28
1-0-10899	2,420	Actual 05/28/2022	22	33
1-0-10898	55	Actual 05/28/2022	0	33
1-0-10899	2,398	Actual 04/25/2022	61	187
1-0-10898	55	Actual 04/25/2022	1	187
1-0-10899	2,337	Historic 10/20/2021	43	28
1-0-10898	54	Historic 10/20/2021		28

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$322.18
PAYMENTS THROUGH 08/01/2022	-\$101.24
ADJUSTMENTS THROUGH 08/01/2022	\$0.00
BALANCE FORWARD	\$220.94

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	4,400	\$256.50
Sub-Total		\$256.50
Total		\$477.44

*Paid 8/26/22*

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
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12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1009001

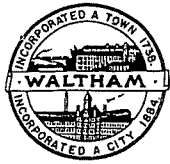
FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735740

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ON OR BEFORE	08/31/22	\$477.44
AMOUNT PAID		

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

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Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

6 259

ACCOUNT NO.	BILLING DATE
1009001	7/1/2022
DUE DATE	
07/29/22	
SERVICE ADDRESS	
240 BEAVER ST	

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ON OR BEFORE	07/29/22	\$322.18
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MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date		Usage	#Days
Current				
1-0-10898	55	Actual	06/25/2022	0 28
1-0-10899	2,460	Actual	06/27/2022	40 30
Reading History				
1-0-10899	2,460	Actual	06/27/2022	40 30
1-0-10898	55	Actual	06/25/2022	0 28
1-0-10899	2,420	Actual	05/28/2022	22 33
1-0-10898	55	Actual	05/28/2022	0 33
1-0-10899	2,398	Actual	04/25/2022	61 187
1-0-10898	55	Actual	04/25/2022	1 187
1-0-10899	2,337	Historic	10/20/2021	43 28
1-0-10898	54	Historic	10/20/2021	28
1-0-10899	2,294	Actual	09/22/2021	27 22
1-0-10898	54	Actual	09/22/2021	0 22

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$101.24
PAYMENTS THROUGH 07/01/2022	\$0.00
ADJUSTMENTS THROUGH 07/01/2022	\$0.00
BALANCE FORWARD	\$101.24

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	4,000	\$220.94
Sub-Total		\$220.94
Total		<b>\$322.18</b>

*Paid 8/12/22*

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

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MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1009001

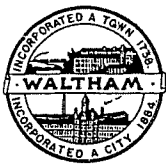
FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735740

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ON OR BEFORE	07/29/22	\$322.18
AMOUNT PAID		

0004735740202400000000000000100900103000000000000000032218006

**CITY OF WALTHAM****WATER AND SEWER DIVISION**POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
**(781)314-3810**OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

ACCOUNT NO	BILLING DATE
1009001	6/1/2022
DUE DATE	
06/30/22	
SERVICE ADDRESS	
240 BEAVER ST	

P L E A S E	ON OR BEFORE	06/30/22	\$101.24

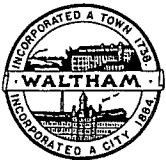
**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

Serial No	Reading & Date		Usage	#Days
Current				
1-0-10898	55	Actual	05/28/2022	0 33
1-0-10899	2,420	Actual	05/28/2022	22 33
Reading History				
1-0-10899	2,420	Actual	05/28/2022	22 33
1-0-10898	55	Actual	05/28/2022	0 33
1-0-10899	2,398	Actual	04/25/2022	61 187
1-0-10898	55	Actual	04/25/2022	1 187
1-0-10899	2,337	Historic	10/20/2021	43 28
1-0-10898	54	Historic	10/20/2021	28
1-0-10899	2,294	Actual	09/22/2021	27 22
1-0-10898	54	Actual	09/22/2021	0 22
1-0-10899	2,267	Actual	08/31/2021	49 35
1-0-10898	54	Actual	08/31/2021	3 35

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$416.52
PAYMENTS THROUGH 06/01/2022	-\$416.52
ADJUSTMENTS THROUGH 06/01/2022	\$0.00
BALANCE FORWARD	\$0.00

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	2,200	\$101.24
Sub-Total		\$101.24
Total		<b>\$101.24</b>

*Paid 7/8/22*

**CITY OF WALTHAM****WATER AND SEWER DIVISION**POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
**(781)314-3810**

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1009001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735740

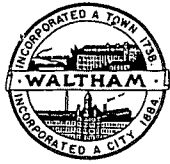
CITY OF WALTHAM  
C/O BUILDING DEPARTMENT  
119 SCHOOL ST.  
WALTHAM MA 02452

P L E A S E	ON OR BEFORE	06/30/22	\$101.24
	AMOUNT PAID		

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**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing  
Information  
(781)314-3810OFFICE HOURS  
Mon - Fri.  
8:30am to 4:30pm

RETAIN THIS PORTION FOR YOUR RECORDS

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CTR WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1009001	10/27/2021
DUE DATE	11/26/21
SERVICE ADDRESS	240 BEAVER ST

ON OR BEFORE	11/26/21	\$2,006.18
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TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$0.00
PAYMENTS THROUGH 10/27/2021	\$0.00
ADJUSTMENTS THROUGH 10/27/2021	\$0.00
BALANCE FORWARD	\$0.00

MOVING? PLEASE CALL 781-314-3810 IN ADVANCE

Serial No	Reading & Date	Usage	#Days
<b>Current</b>			
1-0-10898	54 Historic 10/20/2021		28
1-0-10899	2,337 Historic 10/20/2021	43	28
<b>Reading History</b>			
1-0-10899	2,337 Historic 10/20/2021	43	28
1-0-10898	54 Historic 10/20/2021		28
1-0-10899	2,294 Actual 09/22/2021	27	22
1-0-10898	54 Actual 09/22/2021	0	22
1-0-10899	2,267 Actual 08/31/2021	49	35
1-0-10898	54 Actual 08/31/2021	3	35
1-0-10899	2,218 Actual 07/27/2021	41	34
1-0-10898	51 Actual 07/27/2021	3	34
1-0-10899	2,177 Actual 06/23/2021	57	34
1-0-10898	48 Actual 06/23/2021	3	34

Current Bill Detail	Usage/Unit	AMOUNT
Monthly Water Usage	4,300	\$2,006.18
Sub-Total		\$2,006.18
Total		\$2,006.18

Paid 11/16/21

**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190Billing Information  
(781)314-3810

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAMANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1009001

FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN

4735740

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CTR WAY  
AMHERST MA 01003

ON OR BEFORE	11/26/21	\$2,006.18
AMOUNT PAID		

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## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

**OFFICE HOURS**  
Mon - Fri.  
8:30am to 4:30pm

*RETAIN THIS PORTION FOR YOUR RECORDS*

UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CTR WAY  
AMHERST MA 01003

ACCOUNT NO.	BILLING DATE
1009001	2/1/2021
DUE DATE	
02/26/21	
SERVICE ADDRESS	
240 BEAVER ST	

P P L A Y S E	ON OR BEFORE	02/26/21	▶	\$73.34

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$36.67
PAYMENTS THROUGH 02/01/2021	\$0.00
ADJUSTMENTS THROUGH 02/01/2021	\$0.00
BALANCE FORWARD	\$36.67

**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

Serial No	Reading & Date		Usage	#Days	
Current					
Reading History					
1-0-10899	2,025	Actual	12/18/2020	7	30
1-0-10898	43	Actual	12/18/2020	0	30
1-0-10899	2,018	Actual	11/18/2020	14	27
1-0-10898	43	Actual	11/18/2020	0	27
1-0-10899	2,004	Actual	10/22/2020	32	30
1-0-10898	43	Actual	10/22/2020	0	30
1-0-10899	1,972	Actual	09/22/2020	28	29
1-0-10898	43	Actual	09/22/2020	0	29
1-0-10899	1,944	Actual	08/24/2020	40	34
1-0-10898	43	Actual	08/24/2020	3	34

<u>Current Bill Detail</u>	<u>Usage/Unit</u>	<u>AMOUNT</u>
Monthly Water Usage		\$36.67
	Sub-Total	\$36.67
	Total	\$73.34

PAID 2/5/21



## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190  
WALTHAM, MA 02454-0190

**Billing Information**  
**(781)314-3810**

**BILL PAYABLE ON RECEIPT  
MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM**

ANY AMOUNT WHICH IS  
NOT PAID BY DUE DATE  
WILL BE SUBJECT TO  
INTEREST CHARGES OF  
12 % PER YEAR

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1009001

**FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN**

4735740



UNIVERSITY OF MASSACHUSETTS  
ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269  
360 CAMPUS CTR WAY  
AMHERST MA 01003

P L E A S E	ON OR BEFORE <b>02/26/21</b>	<b>\$73.34</b>
	AMOUNT PAID	

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## CITY OF WALTHAM

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

Billing  
Information  
**(781)314-3810**

## OFFICE HOURS

Mon - Fri.

8:30am to 4:30pm

*RETAIN THIS PORTION FOR YOUR RECORDS*

UNIVERSITY OF MASSACHUSETTS

ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269

360 CAMPUS CTR WAY

AMHERST MA 01003

**MOVING? PLEASE CALL 781-314-3810 IN ADVANCE**

Serial No	Reading & Date		Usage	#Days	
Current					
1-0-10898	43	Actual	12/18/2020	0	30
1-0-10899	2,025	Actual	12/18/2020	7	30
Reading History					
1-0-10899	2,025	Actual	12/18/2020	7	30
1-0-10898	43	Actual	12/18/2020	0	30
1-0-10899	2,018	Actual	11/18/2020	14	27
1-0-10898	43	Actual	11/18/2020	0	27
1-0-10899	2,004	Actual	10/22/2020	32	30
1-0-10898	43	Actual	10/22/2020	0	30
1-0-10899	1,972	Actual	09/22/2020	28	29
1-0-10898	43	Actual	09/22/2020	0	29
1-0-10899	1,944	Actual	08/24/2020	40	34
1-0-10898	43	Actual	08/24/2020	3	34

TRANSACTION THIS PERIOD	AMOUNT
PREVIOUS BALANCE	\$139.40
PAYMENTS THROUGH 01/04/2021	-\$139.40
ADJUSTMENTS THROUGH 01/04/2021	\$0.00
BALANCE FORWARD	\$0.00

<u>Current Bill Detail</u>	<u>Usage/Unit</u>	<u>AMOUNT</u>
Monthly Water Usage	700	\$36.67
	Sub-Total	\$36.67
	Total	\$36.67

Albated 3/3/21



**CITY OF WALTHAM**

WATER AND SEWER DIVISION

POST OFFICE BOX 540190

WALTHAM, MA 02454-0190

### Billing Information

**(781)314-3810**

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MAKE CHECKS PAYABLE TO  
CITY OF WALTHAM**

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12 % PER YEAR

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

SERVICE ADDRESS	ACCOUNT NUMBER
240 BEAVER ST	1009001

**FAILURE TO PAY A PAST  
DUE BALANCE MAY RESULT  
IN A PROPERTY TAX LIEN**

4735740



UNIVERSITY OF MASSACHUSETTS

ATTN: UTILITIES DEPT. PO/REFERENCE # A000868269

360 CAMPUS CTR WAY

AMHERST MA 01003

P L A Y E R	ON OR BEFORE 01/29/21	\$36.67
	AMOUNT PAID	

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